

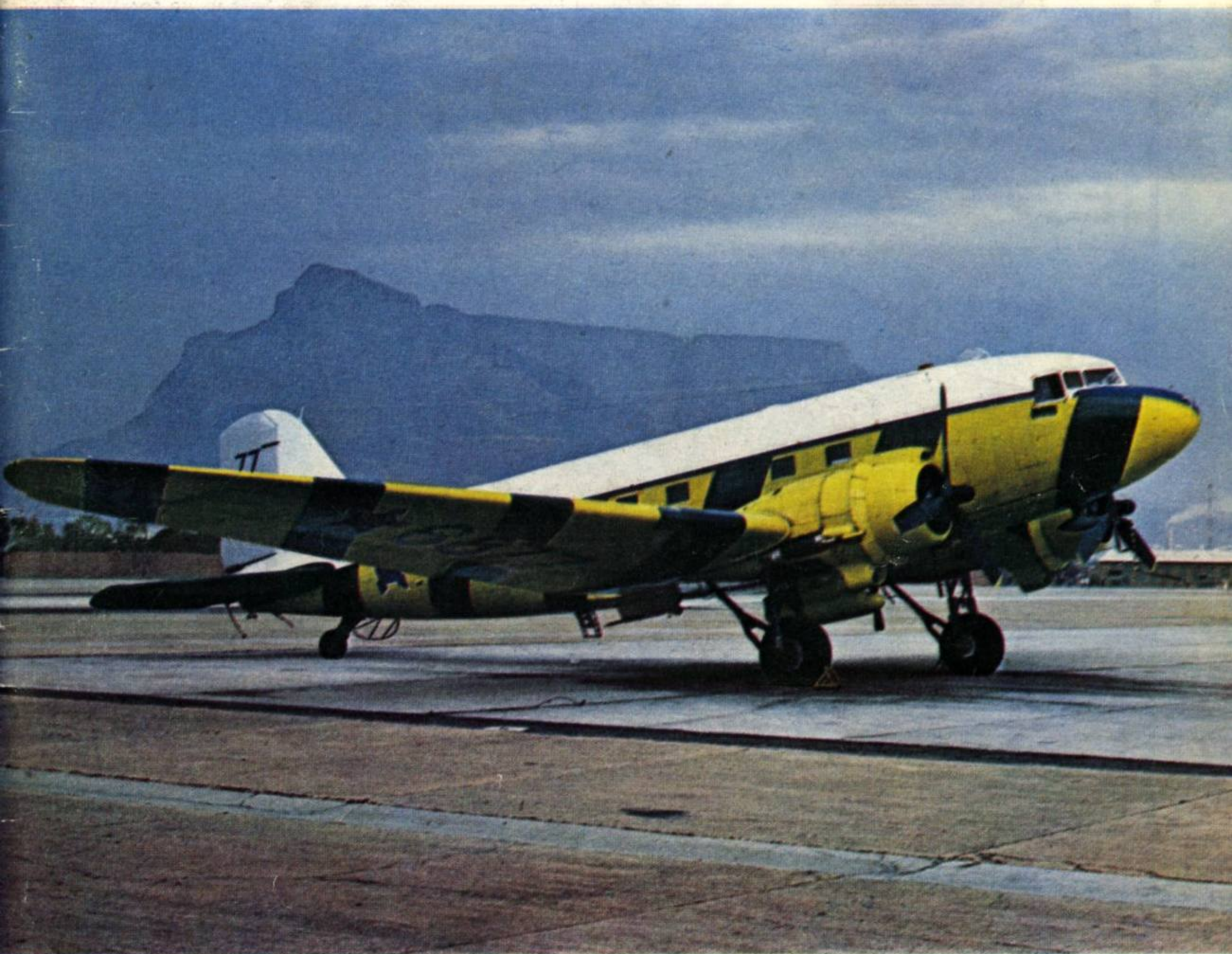
AIRFIX magazine

APRIL 1972

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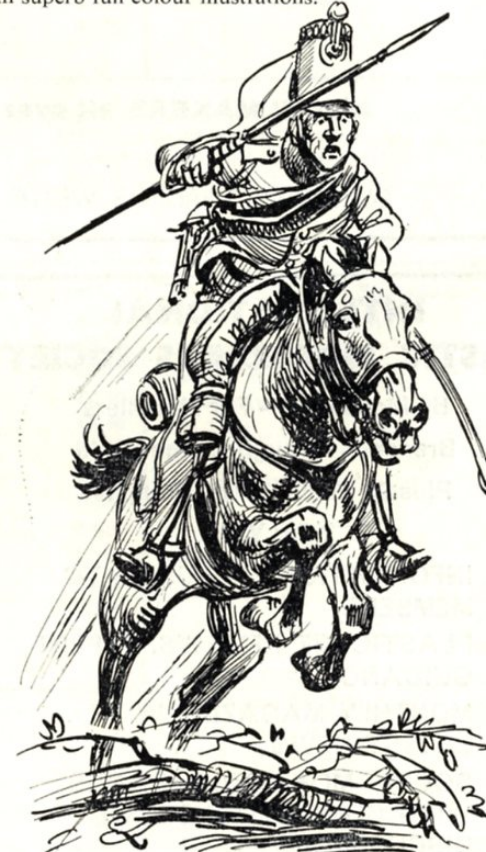


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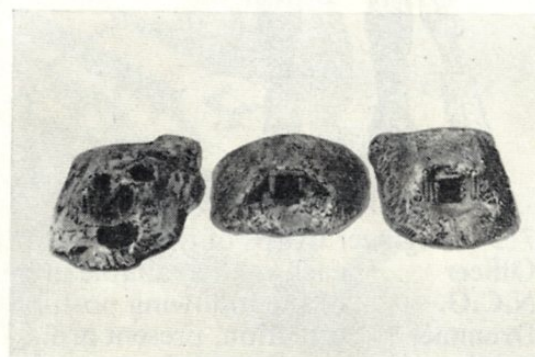
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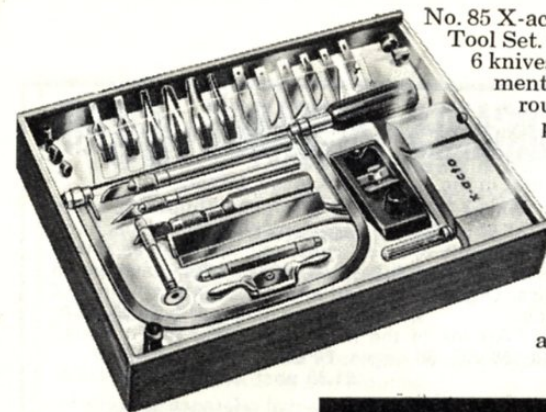
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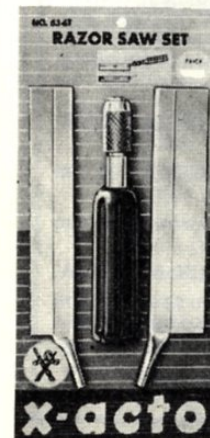


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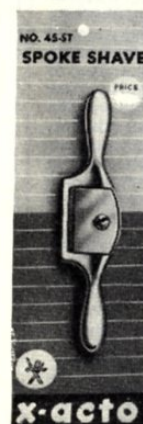
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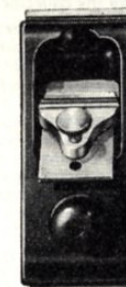
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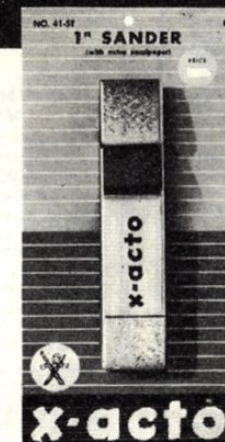
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AIRFIX

magazine
FOR PLASTIC MODELLERS

April 1972

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Cover Picture

The venerable Dakota continues to give faithful service to scores of operators, both military and civil, all over the world. The South African Air Force remains a major user and a colourful machine from their fleet is 6877 which was converted to a target-tug some years ago. The winch under the centre section and the tailwheel guards are the main external changes. The 'traditional' black and yellow striping for target-tugs is much in evidence and clearly this aircraft would make a striking conversion subject for the Airfix Dakota kit. An article on South African Air Force Dakotas and their colour schemes starts on page 435 in this issue.

(Photograph by Dave Becker)

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April 1972



Museum Diorama

25 mm scale diorama made
from converted Airfix figures

by Geoffrey Wheeler

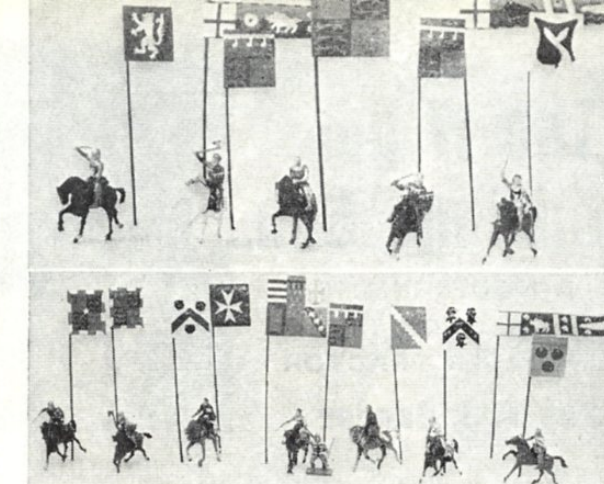
MAY 4, 1971, saw the 500th anniversary of the Battle of Tewkesbury, one of the final conflicts between York and Lancaster in the series of battles later known as the 'Wars of the Roses'. The Lancastrians, with the hope of reaching reinforcements in Wales, had made a forced march through Gloucestershire in a race for the Severn crossing, hotly pursued by the Yorkist army. At Tewkesbury, on the river's bank, they chose to stand and defend their position in the meadows to the south of the town. Here Queen Margaret deployed her troops in the usual three divisions on the rising ground to the rear of Gupshill Manor. Nominal command of the centre of her army was entrusted to her young son, Prince Edward, aided by Lord Wenlock, with the Duke of Somerset in charge of the right division, and the left commanded by the Earl of Devon. Opposing them, on a front some 700 yards long, ranged the Yorkist forces, led by King Edward IV, with his brother Richard, Duke of Gloucester, in the vanguard, and the right wing under Lord Hastings. After an initial attack by Somerset on to the King's division, Gloucester retaliated, and charged into the assault. This move was reinforced by a surprise flank attack from a concealed ambush by Yorkist cavalry, upon the rear of Somerset's troops, and in the resulting confusion the Lancastrians were soon routed.

As part of the Quincentenary celebrations a large scale model diorama of the Battle was constructed for the centrepiece of a

Top left: The centre of the battlefield from the south-east. Left to right foreground: The Yorkist forces of Clarence, King Edward IV and Lord Hastings. The Yorkist ambush (top left) charges the rear of Somerset's division fighting with Gloucester around Gupshill Manor. On the ridge to the rear of the Lancastrian lines of Prince Edward, Lord Wenlock and Devonshire. **Above:** Centre of the model showing Yorkist forces in the foreground, with the Lancastrians to the rear of Gupshill Manor.

commemorative exhibition in Tewkesbury museum. The display is now a permanent feature there, together with battle relics, photographs of memorials to some of the participants and relevant documents. The model shows the decisive moment when the Yorkist ambush charges on to the fighting forces of Gloucester and Somerset, with the remaining divisions drawn up in battle formation opposite each other.

Later incidents depicted include the death of Prince Edward, the Lancastrian heir, the killing of Lord Wenlock, accused of treachery by Somerset for not supporting his charge, and the slaughter of Lancastrian refugees fleeing towards the town in the 'Bloody Meadow'. In order to present as large an area of the battlefield as possible within the dimensions of the room provided, it was evident that 25 mm scale model soldiers would have to be used. The standard Airfix HO/OO range 'Sheriff of Nottingham' and 'Robin Hood' series were also the most economical to obtain in large numbers, although strictly 14th rather than 15th century in details of armour. It was decided that a surface area of 12 feet x 6 feet would take in a large part of the battlefield, centred on Gupshill Manor, now an inn, on the main Tewkesbury to Cheltenham road. This would also include a corner of the wooded hill which concealed the ambush, with the river and 'Bloody Meadow' to the north, and the eastern side bounded by the Swillgate Brook, which marked the extremity of both armies. With allowances for alterations in the present-day appearance of the ground, the contours were mapped out from aerial photographs and Ordnance Survey maps, and graphically transferred to the base. The prominent features of the hill and plateau were marked with wooden blocks over which was fixed a layer of chicken-wire, covered with newspaper strips in papier maché until the desired thickness of ground was built up. Whilst the



Above, top to bottom: Yorkist leaders (left to right) John Mowbray, Duke of Norfolk; Richard, Duke of Gloucester; King Edward IV; George, Duke of Clarence; William, Lord Hastings. Lancastrian leaders (left to right) John Beaufort; Edmund Beaufort, Duke of Somerset; Sir John Langstrother, Prior of St Johns; Prince Edward of Lancaster with his sword-bearer John Gower; Sir John Fortescue; John, Lord Wenlock; John Courtenay, Earl of Devonshire. **Left:** Death of the Lancastrian heir, Prince Edward. The black bull standard is that of the Duke of Clarence (on horse), Edward's torn banner can be seen on the ground. On the ground is his sword-bearer, John Gower. **Foot of page:** Battle seen from the Yorkist positions; note the use of small bombards in front of the main battle line.

final layer of paste was still wet, a generous covering of sand was applied to form the basic ground texture. When dry, this could then either be sprayed with green paint for areas of grass, or left exposed for earth. An idea of the lie of the land in 1471 has been preserved in a description of the Battle by a contemporary chronicler, who records that the Lancastrians were positioned 'in a close, even at the town's end . . . afore them and on every hand . . . foul lanes and deep dikes, and many hedges, with hills and valleys . . . a right evil place to approach'. The few roads and tracks which then existed were therefore marked and provided with the 'deep dikes' or ditches. For the hedges and bushes, strips of bathroom loofah suitably dyed and painted, made a realistic representation. This material also provided the 'thatch' for the roof on the model of Gupshill Manor, which was then probably only a farmhouse, made from card and paper; the building on the model was inspired by its present 'reconstructed' state. The trees were simulated by covering small twigs with fibres from shredded nylon pot-scorers, afterwards sprayed various shades of green.

To obtain the most realistic appearance of the armies it was

apparent that a certain amount of conversion would be necessary in order to avoid the serried ranks of soldiers lined up stiffly in the same position. With over 2,000 figures being used, the simplest and speediest method adopted for the majority of soldiers was to neatly cut the figure through at the waist, vary the pose, and join together again with UHU cement. Alternatively, the body or legs could be exchanged with those of another figure, thus providing innumerable variations. For the more detailed conversions of the leaders and other important knights, this technique was carried even further, with the substitution of heads, arms and limbs, as well as shields, swords and other weapons, to obtain the individual figures seen in the illustrations. In this way, with the addition of material collected from plastic sprue, it was possible to compose figures of heralds, drummers and trumpeters for the retinue of both armies. A number of the horses also underwent similar operations, in particular the falling and dying animals to the forefront of the cavalry ambush. In order to dispense with the bases provided for the horses, it was necessary to

Continued on page 446



Left: A panoramic view of the model showing the Yorkist cavalry attack in the background. **Below:** The Yorkist centre with King Edward IV under the Royal Standard (see opposite page for detailed view of the various standards). Note also the accurate heraldic emblazons on the various knights' surcoats, a difficult thing to portray reasonably in this small scale.



The 17 pdr Anti-tank Gun

A MODEL IN 1:76
SCALE FOR THE
CRUSADER TRACTOR

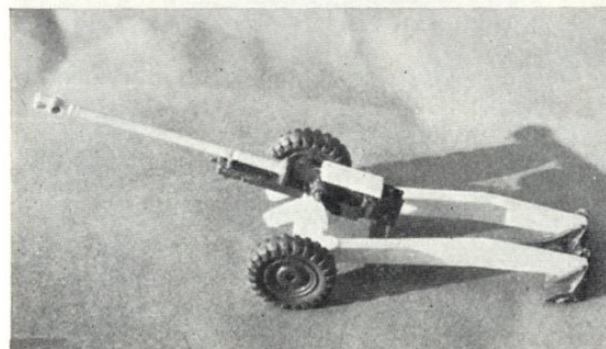
By T. J. Gander

THE 17 pounder anti-tank gun first entered service in North Africa during March 1943. It arrived just in time to take on the Tiger tanks recently arrived to back up the German forces holding Tunisia. The 17 pounder's muzzle velocity of 3,950 feet per second and the shell weight, enabled the hard pressed Royal Artillery gunners to tackle Tigers with a high degree of success, as the only weapon available to them up till then was the 6 pounder which could not penetrate the Tiger's frontal armour. The 17 pounder was given the nickname 'Pheasant' and remained in service for many years after the war until it was replaced by the 105 mm recoilless guns in service today. It was a relatively large gun that weighed nearly three tons, and required up to eight men to manhandle it in the field. Calibre was 76.2 mm and it could fire a wide range of shells including HE which enabled it to take a small part in the massive offensive barrages of the 1944-45 NW Europe campaign.

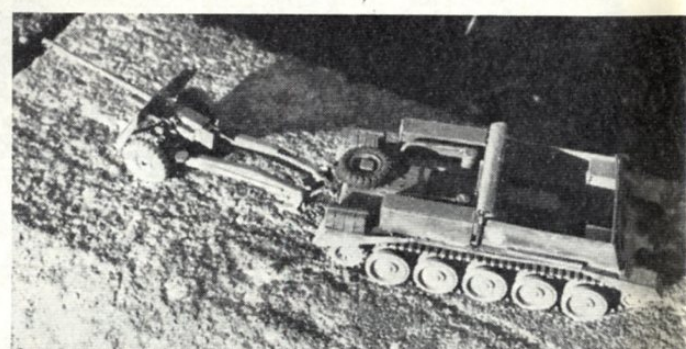
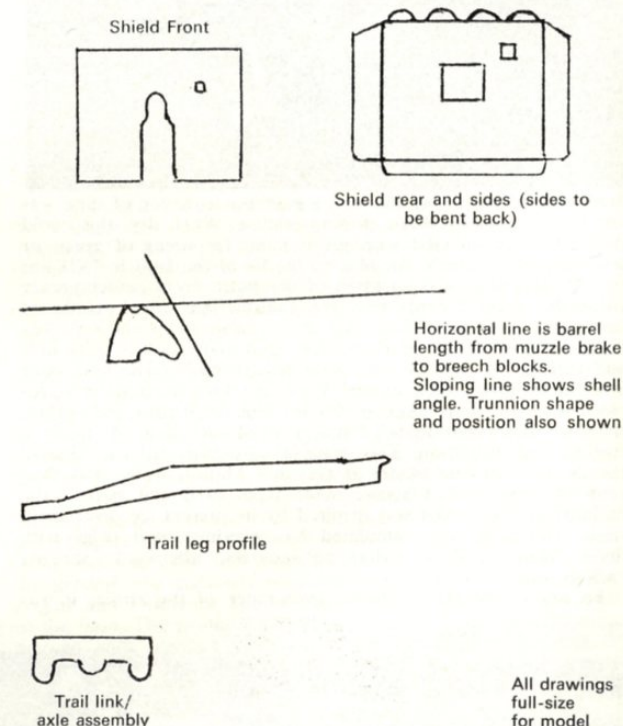
A model of the 17 pounder makes the natural accompaniment for the Crusader Gun Tractor described in the March 1972 issue of *Airfix Magazine*. The source material for the model came from examination of a 17 pounder in the Imperial War Museum and also from a 1:76 drawing in a back number of *Tankette*, the magazine of the MAFVA. If you don't already belong to this organisation I thoroughly recommend that you do so, as *Tankette* contains much material and drawings not available elsewhere and the Association also provides an information service. A SAE to G. Williams, 15 Berwick Avenue, Heaton Mersey, Stockport, Cheshire, SK4 3AA, will provide further details.

To make the model I have had to dig deep into the spares box. Every plastic modeller who has carried out even simple conversions will soon find that the bits left over from kits soon accumulate and many unlikely parts end up in other conversions. The rule is throw nothing away! Add likely looking items such as old tooth brush handles and used ball-point pen barrels and before long your spares box will enable you

Below: View of model awaiting gun-shield and towing eyes. Parts in white are made from plastic card. All other parts are from the scrap box. Below right: Completed model with Crusader Gun Tractor described last month.

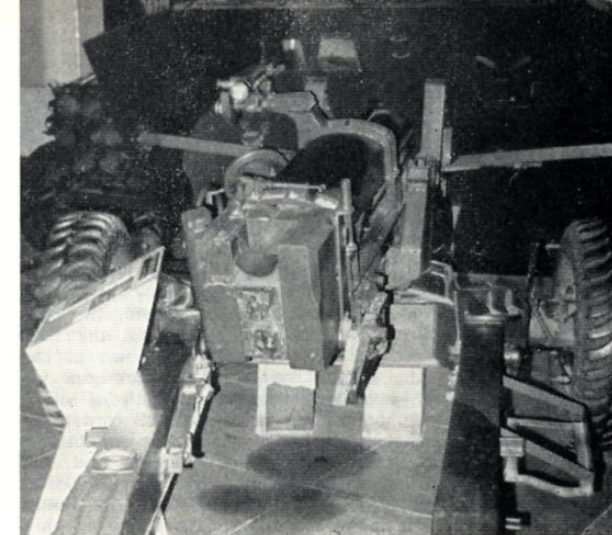


Above: A battery of 17 pdrs behind M3 Half-tracks on the move in Italy towards the Gothic Line. Note the camouflage covers on the gun-shields and the various items of equipment attached to the nearest gun.



to tackle models such as the one described here. However the ingenuity of each individual will doubtless overcome any parts shortages that may arise. This model cost me nothing in kit costs as all the parts used were left over from other conversions, or made from small bits of scrap plastic card.

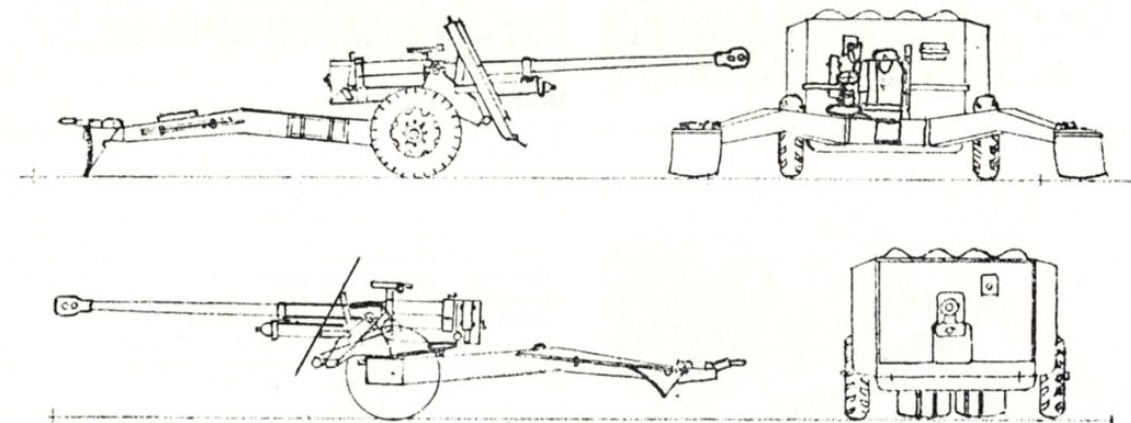
First part to tackle was the barrel and recoil assembly. A 25 pounder barrel was cut back to the ring over the barrel (see photo) and a 38 mm length of Panther barrel with its muzzle brake sanded down to a smoother profile glued in its place. The 25 pounder breech block was enlarged so that its bottom was flush with the bottom of the recoil mechanism. I used an old Minitank part for this but scrap plastic could be used—note however that the breech block was of the falling block variety. Add a 8x3 mm rectangle of thick card with rounded off sides just forward of the breech block to simulate what was probably a barrel counter weight, and the barrel assembly is finished except for detailing. In such a small scale this could



Above left and top: Close-up of the 17 pdr gun on show at the Imperial War Museum showing barrel recoil assembly, breech-block, sighting mechanism and shaped gun-shield.

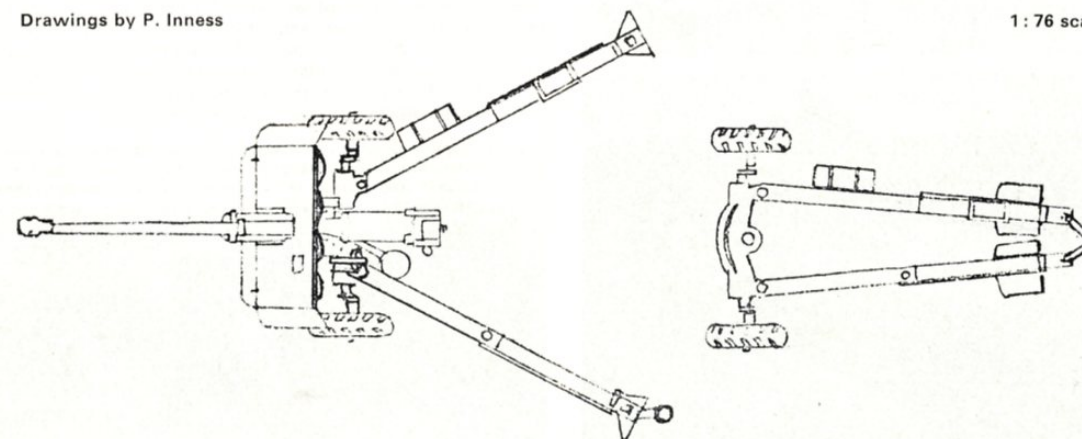
be difficult so I limited this to a plastic rod breech lever on the right of the block and a small piece of Microstrip to simulate its housing.

Next came the carriage. This was almost entirely scratch built with the two trail legs made up from laminated card.



Drawings by P. Inness

1:76 scale

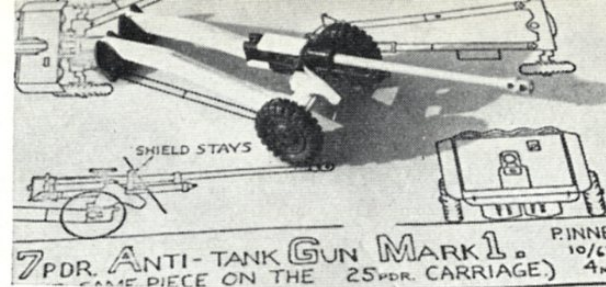
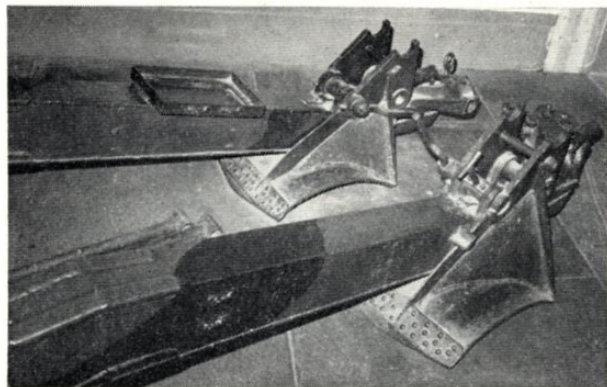
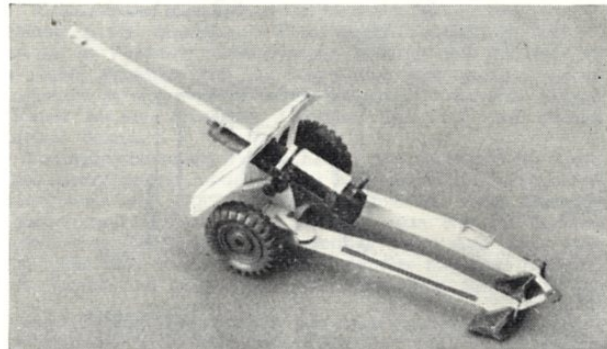


17 pdr—continued

Each card layer was cut using the template shown in the drawing and then held together with layers of tube cement until a thickness of 2mm was reached. The parts were left to dry and the excess cement then sanded down. At this stage it is necessary to determine in which position you want the legs to be. My model was made for towing behind the Gun Tractor and so the legs are folded together. In action they would be splayed apart at an angle of 60 degrees and with the trail spades (the next part) folded down. For towing, the trail spades were folded up and over the legs as shown in the photograph—I used the spades from the 5.5 inch gun kit filed to shape, but they could be manufactured from scrap. The trail link and axle mount was cut from thick card using the drawn template and the trails cemented under it with 14 mm lengths of Microstrip under, and in front of, the trail legs for rigidity. The trail spades were glued together and the trail eye made from scrap plastic, though 5 amp fuse wire would probably be better. Next the trunnions were cut from thin plastic card and cemented onto the axle mount with a 5 mm wide strip of card between them helping to keep them vertical. The gun was cemented on to the trunnion tops with the muzzle canted upwards as the model was intended for towing. The wheels came from the 25 pounder Quad. They are not strictly accurate but don't look too bad. Fixing to the carriage was done by using the ends of the 6 pounder axle cut off and facing forwards, as on the 6 pounder mounting.

Using the drawings shown, add the shield. Note that this was made up of two layers of thin armour. The spacing effect can be simulated by spacing the two card shields with thin Microstrip. Add the sloping sides and the bottom flap, and the model is finished apart from detailing. The outline-breaking wavy line at the shield top was made from 5 amp fuse wire as were the odd brackets and racks on the right hand trail leg.

Below top to bottom: Completed model with shield attached awaiting painting. Detail view of the trail spades and towing eyes.



Above: Another view of the half completed model clearly showing the trunnion and recoil detail. Compare with the actual gun shown on previous page.

Shield stays from the shield side flaps to the trunnions were from Microstrip again, and the sighting telescope from plastic rod. Plastic rod was also used for the rod fixed to the left trail leg. The seat was from the 25 pounder, and sighting mechanism from the 6 pounder.

The model was painted olive green with dark earth liberally applied to the lower surfaces to simulate mud, and the breech block finished in gunmetal. As finished the gun is as it would have been when towed out of action in a hurry. At all other times when travelling the breech, muzzle, and sighting mechanism would have been carefully protected by canvas covers which could be made from thin tissue paper. I have not included any figures in my model but details of uniforms for anyone who wishes to add them are given below.

If you do not wish to use the Crusader Gun Tractor as a towing vehicle, some M3 half tracks were used for the purpose in Sicily and Italy. Another short cut for this model is the 17 pounder Mk 11. This was the 17 pounder gun mounted direct on to the 25 pounder carriage as a stop gap when 17 pounder carriages were in short supply. These actually saw service before the Mark 1 as they went into action at the end of 1942.

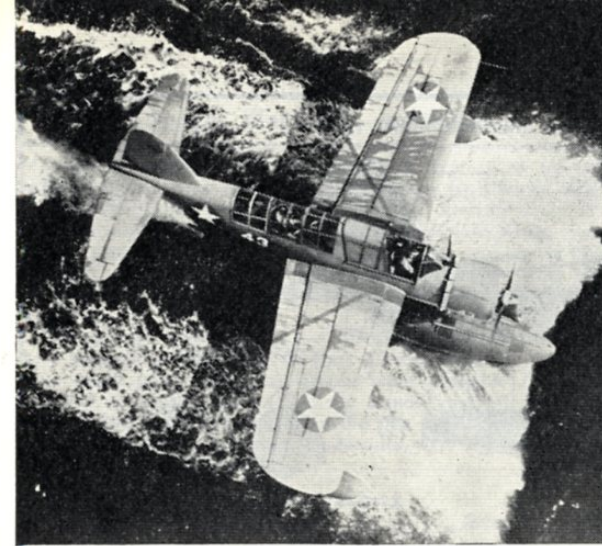
Uniform and Crew

EXAMINATION of contemporary photographs reveals a wide variety of clothing worn in the field by gun crews. The basis of these is the khaki battledress blouse and trousers. The top button of the blouse was usually left undone. In moderately cold weather, leather jerkins were worn over battledress, with khaki beret on the head. As the weather grew colder, a khaki balaclava helmet was added under the beret; colder still, greatcoats (standard khaki issue) were worn. Normal footwear was the metal-studded ankle boot. Snow smocks and trousers were worn in the Ardennes in 1944-45. Few of these crews seemed to wear steel helmets. The general impression was one of personal comfort almost to the point of scruffiness. Regimental shoulder titles and divisional emblems were not always worn. For a miniature 17 pounder gun crew the figures from the Airfix 25 pounder kit can be used. Other useful figures are the RAF men supplied in the Bloodhound kit. Yet another useful source of battledress figures in 1:76 scale is the Merit 'Army Personnel' set, though this is hard to find these days. Finally, there are one or two useful figures in the Airfix 'Civilians' set, in particular a policeman and a man in a duffle coat. With heads changed, or modified to include berets, two more useful British soldier figures result.

Below: 17 pdr gun with wavy camouflage used to break up the outline of the barrel. For those wishing to model a gun crew this picture should be particularly useful as it shows gunners dressed as described here.



AIRFIX magazine



VOUGHT KINGFISHER

Alan W. Hall describes this famous floatplane and gives suggestions for colour schemes and simple conversions

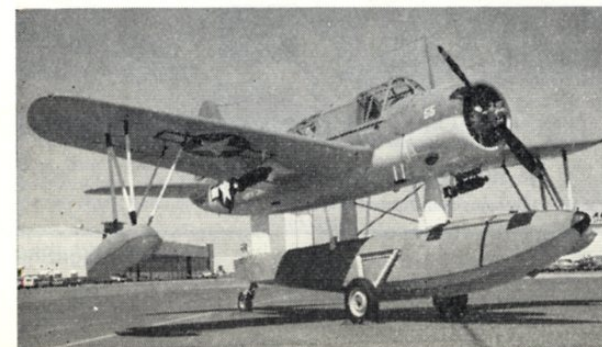
IHAVE always had a soft spot for the Kingfisher. It was an attractive little aircraft which first caught my attention in the days of balsa wood kits. I well remember making a model of it in 1943 which turned out to be one of the best in my then, small collection. My wartime efforts are now, perhaps best forgotten but I still keep my liking for the Kingfisher and was therefore delighted when Airfix produced their model some years ago.

There are only a few conversions that can be made to the model as Airfix have provided parts for the major change, that of a landplane version. On the other hand there is the prototype which can be modelled and the several minor modifications that appeared from time to time during the aircraft's service. Colour scheme variations are extremely interesting and can give a number of variations, all of which are reasonably easy to produce.

The Kingfisher saw service in large numbers in all parts of the Pacific. A few entered Royal Navy service in home waters first appearing in 1942. A total of 100 were provided under Lease-Lend agreements and were used for operational service on armed merchant cruisers and in a training role in the West Indies. The first unit to have the Kingfisher as its equipment was No 703 Squadron FAA.

Vought built over 1,500 OS2Us most of which were con-

The rebuilt OS2U Kingfisher that has recently been completed by Vought Aeronautics veteran employees. The aircraft crashed during the war on an island off the west Canadian coast. It is now preserved on board the USS North Carolina.



This top view of a Kingfisher graphically illustrates the weathered appearance of many of these aircraft after a short period in service. The position of the overwing stars of the national insignia are also standard for aircraft of this type.

structed as floatplanes. They served with the US Navy as reconnaissance aircraft doubling as air-sea rescue machines. One Kingfisher named 'The Bug' rescued the famous Captain Eddie Rickenbacker and his crew after they had been shot down in the South Pacific. Due to the number of extra bodies on board the aircraft could not take off and taxied across forty miles of rough sea to safety. Kingfishers were also used for offensive operations and they were employed in dive bombing attacks on Japanese installations in the Aleutians each carrying 50 per cent in excess of their normal bomb load.

The Royal Australian Air Force used 18 Kingfishers. These were part of an order being delivered to the Dutch Air Force in Sumatra at the time of the Japanese invasion. Eventually the aircraft were off-loaded from refugee cargo ships at Rathmines, went to No. 1 Aircraft Depot, and from 1942 onward served with No 107 Squadron RAAF. The Squadron used the codes 'JE' on their aircraft and all serials began with A48.

Markings and unit details have been difficult to establish during the research for this article. Most Kingfishers in the US Navy service did not have codes or display any unit designation. Individual aircraft letters or numbers were used (mostly the latter) and therefore the chance of tracing the aircraft through historical references is almost impossible. Many Kingfishers were assigned to cruisers or battleships of the US Fleet and although a few of these did have the name of the ship painted in small letters on the rear fuselage this was by no means common practice.

Apart from pre-war and prototype aircraft, colour schemes for the Kingfisher did not vary a great deal during the war. US Navy aircraft were painted non-specular blue grey on the upper surfaces and non-specular light grey underneath. Seven horizontal red stripes on a white ground were seen on the rudders of aircraft in the 1942 period but these were quickly either painted out or omitted. The US star also lost its red dot centre to prevent confusion with the Japanese 'meatball' at a distance. A study of photographs may indicate that some aircraft were painted matt insignia white on the undersides at a later stage during the war but the lack of colour reference could mean that this was merely a much faded and operationally battered light grey. Codes were either black or white and propellers were left natural metal on the forward side and painted matt black on the rear. Blade tips were painted red, orange yellow, and blue from the tip downwards.

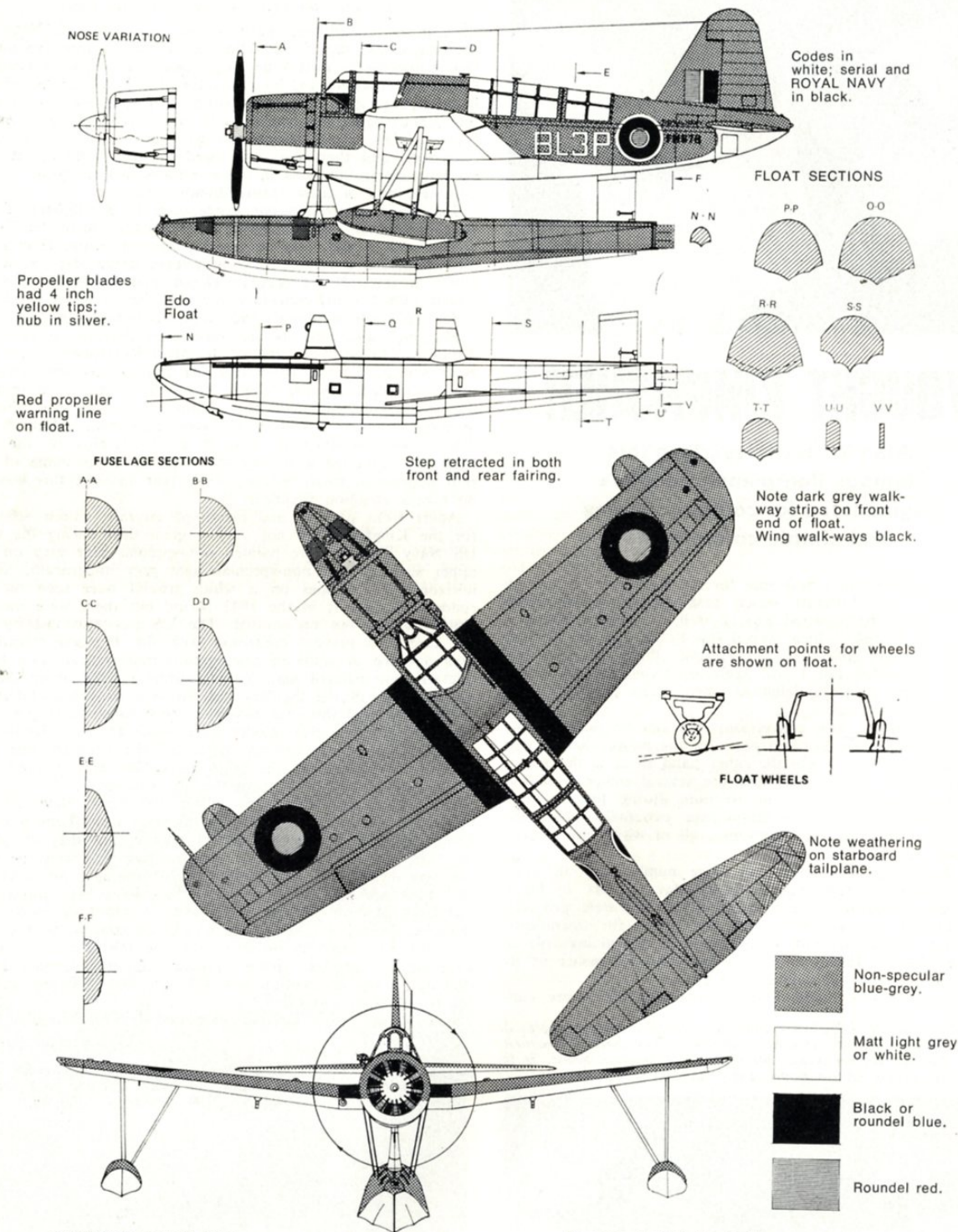
It is difficult to say if any of the 100 Royal Navy aircraft were camouflaged in the same way as other Lease-Lend aircraft. From available evidence it would appear that they remained in their blue grey and light grey scheme following delivery but here again only black and white photographs are available for study and this colour scheme may have been altered to Sea Grey Medium for the upper surfaces whilst the undersides remained light grey. The study of photographs without colour reference for confirmation can often be misleading so unless a reader can produce definite colour reference schemes I am sticking to my assumption that this was the standard scheme for Royal Navy aircraft.

Few Royal Navy aircraft were coded. The Imperial War
Continued on page 425

Based at Cape May, this OS2U-2 has a pre-war overall silver scheme with red bands round the rear fuselage and engine cowling. The Serial No 2190 appears on the fin.



Vought OS2U-3 Kingfisher I, FN678, unit unknown, FAA, 1943



Vought Kingfisher—continued

Museum photograph with this article is typical of all other pictures I have seen apart from that taken by Charles Brown and published in Thetford's *British Naval Aircraft since 1912*. Here the codes BL3P appear on Kingfisher FN678. Other photographs seen showing aircraft of No 703 Sqn serving on board HMAMC *Cicilia* were without codes. These pictures were taken in December 1943 and include aircraft serialised FN709, '687 and '728.

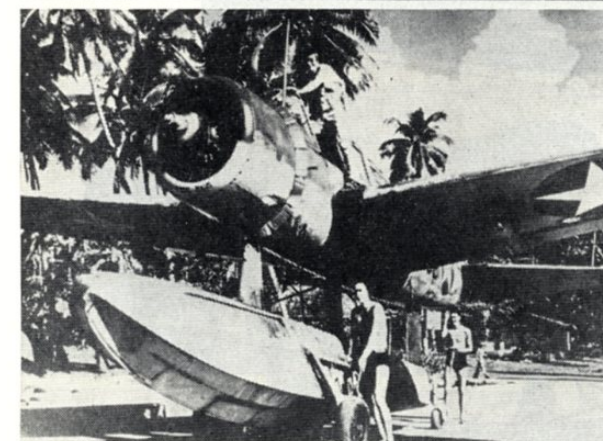
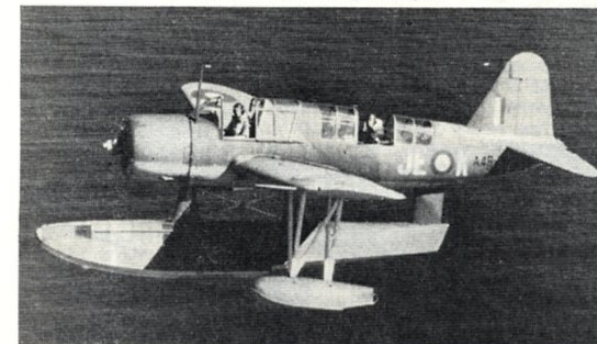
The aircraft employed by No 107 RAAF on the other hand were camouflaged probably in Dark Green and Dark Sea Grey. Here again only three photographs were available for inspection and it appears evident that the camouflage followed no set pattern. The aircraft appearing in the side view drawings, A48-9, differs from others available. Undersides were light grey, codes in white and serials black.

Conversions

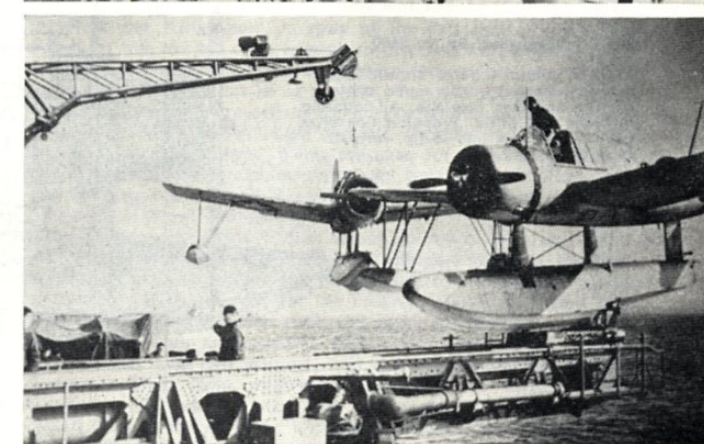
Changes in appearance between the various Kingfishers were few. The main differences were in the prototype aircraft which had an entirely different shape around the forepart of the rear canopy. In the early tests the aircraft did not have the rearmost of the three central pylons connecting the float to the fuselage but this was added after only a few taxi trials.

Certain OS2U-3s in US Navy service later in the war were given spinners on the propeller and many of the first aircraft

This picture of an OS2U-3 Kingfisher in No 107 Sqn RAAF markings gives an indication of the demarcation lines between the camouflage areas. Serialised A48-9 the aircraft was one of 18 used by the squadron after they had been transferred from Sumatra on refugee ships.



'The Bug'. This Kingfisher is distinguished by being the one to rescue Capt Eddie Rickenbacker in October 1942. Previously the aircraft had served at Pearl Harbour on the battleship USS *Pennsylvania*.



Top: OS2U-2 on the catapult of the USS *North Carolina*. Note the unusual light grey overall colour scheme which confirms that the picture was taken in May 1941, before the United States entered the war. Details from the catapult on the port side of the ship can be compared with that on the starboard for use in making a diorama. The ship carried three Kingfishers serialised 2288, 3073 and 3074. **Above:** Close view of Kingfishers being placed on battleship catapults.

in service had the Vought built float. This was changed retrospectively for one built by the Edo company. The drawing of the prototype shows the original style whereas all other drawings are equipped with the Edo variation.

One of the most interesting and decorative conversion ideas that can be applied to the Kingfisher is probably a diorama presentation where the aircraft can be shown mounted on one of the catapults found on naval vessels operating in the Pacific. My photograph shows a typical example of a Kingfisher on the USS *North Carolina*. The various aspects of the equipment are shown so that it would not be too difficult a task to build one or both of these catapults from sheet Plastikard using various parts from other kits to achieve the end result. Parts of the old Airfix railway turntable kit (no longer made) could be used, for example, and parts of the girder bridge could provide the basic framework. Scale dimensions can be worked out by using the height of the men working on the catapults as roughly 5 ft 6 inches high and dividing this into the length and width of the equipment.

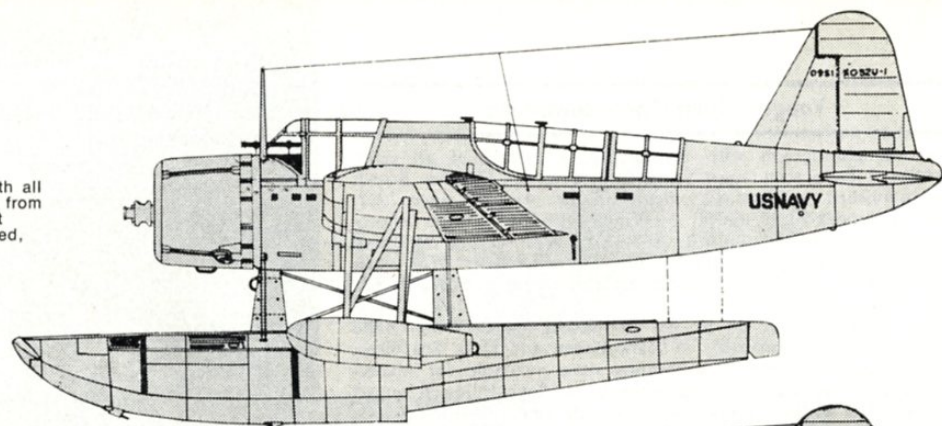
Royal Navy Kingfisher

The Royal Navy's requirement for the OS2U-3 was limited to the re-equipment of certain light cruiser and Armed Merchant Cruiser Catapult Flights. The ships concerned had a Light Series catapult, capable of launching aircraft with an all-up weight of less than 5,500 lb; they were thus unable to carry the Supermarine

Continued on page 427

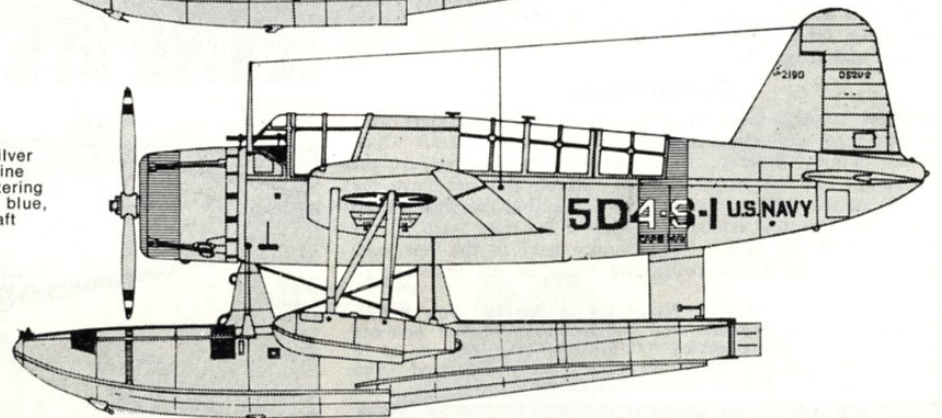
XOS2U-1, Bu No 0951

Prototype aircraft silver overall with all lettering in black. Note variations from production version in rear cockpit and floats. Rear strut, shown dotted, was added after early test flight.



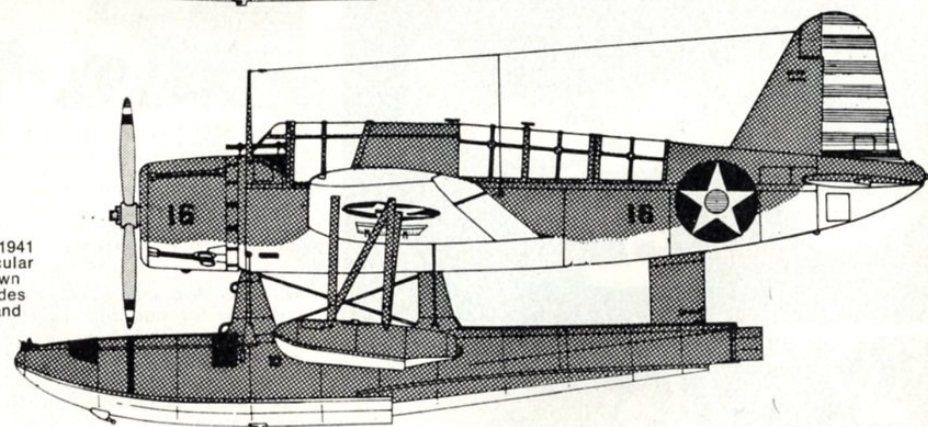
OS2U-2 Kingfisher, Bu No 2190

Pre-war colour scheme shown; silver overall with red bands round engine nacelle and rear fuselage. All lettering in black and white. Propeller tips blue, yellow, red from hub to tip. Aircraft from Cape May.



OS2U-2 Kingfisher

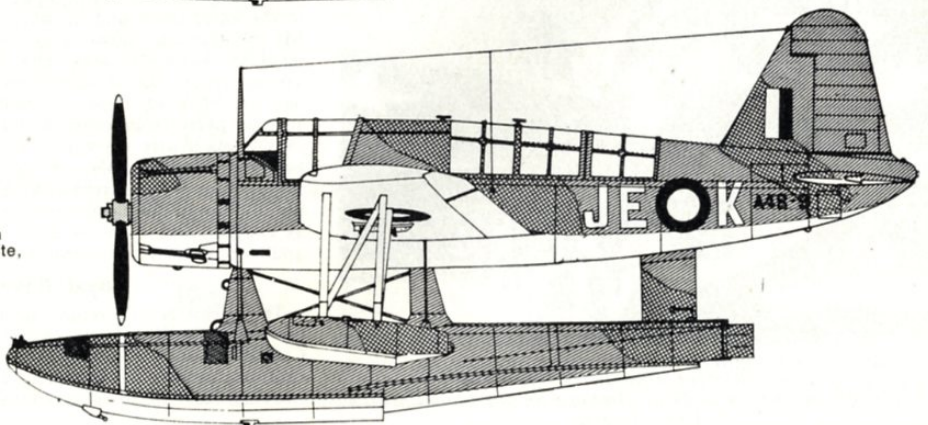
Typical US Navy colour scheme of 1941 period. All upper surfaces non-specular blue-grey. All under surfaces (shown white), non-specular light grey. Codes and serials black, tail stripes red and white. Unit unknown.



Drawings by Alan W. Hall

OS2U-3 Kingfisher A48-9

No 107 Sqn RAAF, 1942. Dark green and dark sea grey with light grey undersides. Codes in white, serials in black.



Vought Kingfisher—continued

Walrus, the principal catapult aircraft with the British Fleet, and had been equipped with the under-powered and somewhat fragile Fairey Seafox floatplane. As the British aircraft industry had no Seafox replacement under development, two US Navy types were requested under Lend-Lease—the Curtiss SO3C Seamew and the Vought OS2U. The first named was a complete failure as a shipboard aircraft as far as the RN was concerned, and in early 1942 it was decided that ships retaining Light Series catapults would be equipped with Kingfishers.

The first batch of Kingfishers was ferried to the United Kingdom aboard the carrier *Furious*, and in mid-May 1942, 703 Squadron was formed at Lee-on-Solent to provide a headquarters unit for the Kingfisher Flights, the first being 703 Fidelity Flight, which worked up at Lee and then on the Tay at Dundee, with one machine. *Ranpura* Flight was formed on June 1, 1942, with two Kingfishers, but by the time that it reached Dundee two months later, the Flight had been allocated to *Cilicia* and had been re-designated accordingly. *Corfu* and *Canton* Flights formed at Lee on August 15, 1942, each with a single aircraft, increasing to two during the autumn.

All four Flights were to embark in auxiliaries. HMS *Fidelity* was a 'Special Service Vessel', used for a variety of Special Operations, but the other three ships were all Armed Merchant Cruisers—ex-P & O liners—used for ocean escort duties in the South Atlantic and the Indian Ocean. Not until January 1943 did the first Flights form, for embarkation in the fast light cruisers *Emerald* and *Enterprise*. At the same time, two spare AMC Flights were formed, one at Palisadoes, Jamaica, and the other at Wingfield, Capetown, each with a single Kingfisher.

Fidelity Flight embarked in October 1942 and worked-up with the ship. In December, *Fidelity* joined a convoy on passage to Freetown and on 28th was instructed to fly her aircraft on a dusk search for the U-boats which had already sunk a number of ships from the convoy. She had no catapult, and in the water take-off from a rough sea the Kingfisher crashed, both aircrew being rescued. *Fidelity* herself was sunk off the Azores three days later.

The history of the 703 Squadron Flights in the Armed Merchant Cruisers was somewhat happier. *Cilicia*, *Corfu* and *Canton* were refitted during the summer and autumn of 1942, a US Navy-pattern light catapult being installed in each. *Canton*, which had previously been equipped with a British catapult and a Seafox, and *Cilicia* commenced catapult trials in November 1942, and became operational early in 1943. *Cilicia* served in the South Atlantic from January 6, 1943, until January 4, 1944, operating from Freetown on convoy escort and ocean search duties. *Canton* joined her in early February 1943, but left at the end of March, which time *Corfu* was also based at Freetown.

The two ships in the South Atlantic used their aircraft exten-

These two pictures of a Kingfisher in Royal Navy markings were probably taken before the aircraft was shipped to the UK. Note that the underwing roundels were of the 'B' type.



Royal Navy ground crew guide a Kingfisher down the ramp and into the water. The aircraft's serial is FN899 and apart from the standard camouflage scheme it has a matt black anti-dazzle panel in front of the cockpit (Imperial War Museum).

sively for dawn and late afternoon clearance searches, often operating in surprisingly bad weather conditions. *Corfu* Flight flew 142 sorties in ten months and suffered no damage whatsoever to her Kingfishers, in spite of the fact that on only two occasions was the sea calm enough to dispense with a 'slick' from the ship. *Cilicia* Flight spent even more time at sea, her aircraft flying nearly 200 sorties in 11 months. Towards the end of 1943, both Flights were increased to three aircraft, and during the first fortnight of 1944 the two ships operated together as they returned to the United Kingdom, flying searches for blockade runners. The Kingfishers never sighted an enemy warship or auxiliary, but the negative value of their patrols was important: at least the Allies knew where the enemy wasn't.

Canton arrived in the Indian Ocean in April 1943, and spent the next 11 months escorting troop convoys between Durban, Bombay, Colombo, Aden and Mombasa. The Royal Navy had no aircraft carrier to spare for the Eastern Fleet at this time, and from July until September 1943, the entire air strength at sea in the Indian Ocean amounted to just 12 Walruses aboard a sea-plane carrier and two cruisers, and the two Kingfishers aboard *Canton*, joined, from mid-August, by *Emerald* with her one Kingfisher. The aircraft were less frequently used in the Indian Ocean than in the Atlantic, but *Canton*'s two aircraft flew some 120 sorties during the 13 months she spent away from the United Kingdom.

Emerald remained with the Eastern Fleet after *Canton*'s departure in early February. Her sister-ship *Enterprise* was intended to join her in January 1944, but it was decided that she should be retained in European waters. As catapult aircraft were being phased out of the Fleet, *Enterprise* Flight did not join the ship and disbanded at Dundee in mid-January 1944, after a year ashore. The return of *Emerald* at the end of April 1944 marked the demise of the Kingfisher's sea service with the Royal Navy and the disbanding of 703 Squadron.

The needs of 703 Squadron, for embarked, training, and reserve purposes, accounted for up to 40 out of the 100 aircraft delivered. Others were employed for observer training duties at Piarco, Trinidad, where 749 Squadron was partly equipped with Kingfishers from late 1942 until the spring of 1945. In South Africa, a Fleet Requirements Squadron, 726, had two Kingfishers on strength from September 1943 until early 1945, based at Durban for target-towing, radar calibration, communications, and miscellaneous tasks. None appear to have remained in service for very long after VE-Day.

That the Kingfisher saw so little embarked deployment was no fault of its own. The Royal Navy already possessed an excellent 'sea-boat' in the Walrus, which could stand up to bad weather better than any other small seaplane, and which could carry up to three passengers as well as two crew-men. As most of the cruisers and capital ships were equipped to operate the Walrus up to 1943 (when the shipborne catapult aircraft began to be withdrawn) it was obviously preferable to retain the home-bred type. The Kingfisher was, however, universally preferred to the Seafox which it replaced as a light reconnaissance type. Its good water-handling qualities being praised by all the Flights which used it.

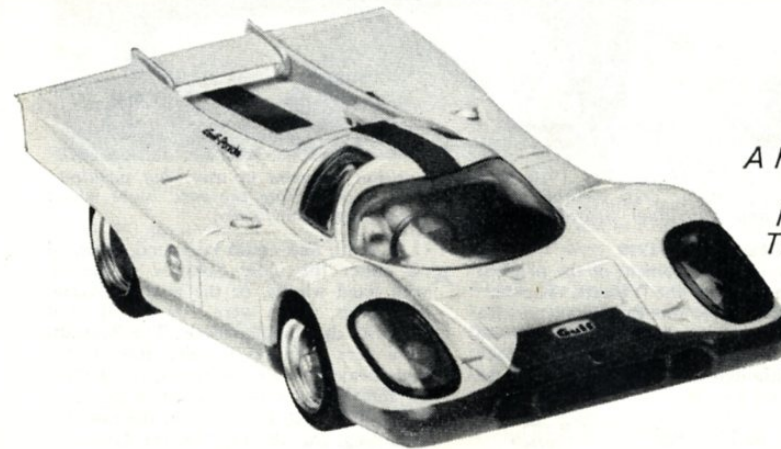
(We are grateful to Art Schoeni of Vought Aeronautics for these detailed notes on Royal Navy Kingfisher operations—A.W.H.)

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Above: View of completed models. Left to right: MG NCO, Maxim PM 1910 in firing position; Maxim in travelling position; DS 1939 on anti-aircraft mounting; DS 1939 in firing position; crew member with ammunition box. Note the card bases which have angled edges allowing groups and individual figures to be butted together realistically.

Russian Infantry Weapons of World War II

Part 1: Heavy Machine Guns By Bob O'Brien

TWO things started me on this little project—first the publication of the Wargames Research Group *Rules for Infantry Action*, and then the excellent *Arms and Armour* Press book by A. J. Barker and J. Walter on *Russian Infantry Weapons of World War 2*.

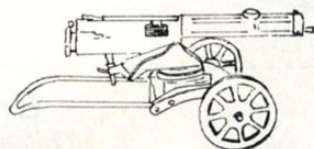
Having had a hand in the production of the rules it seemed only right and proper that I should have a suitable table top force to use, and with the book to hand, Russian it must be.

These articles will not be primarily concerned with conversion of figures, but mainly with construction and adaptation of the various weapons used by the Russian Infantry. First, we deal with heavy and medium machine guns, which are generally distinguished from light machine guns by being belt fed, capable of more sustained fire for longer periods over a greater range, and using some form of tripod, or similar mounting. The light machine gun is normally a drum- or magazine-fed weapon, intended for squad use by one man. There are some exceptions to this, the German MG 34 and later types being belt fed, and capable of use on a tripod with a two or three man crew, or as a one man weapon.

The sketches illustrate the main types of home-produced machine guns, but the Russians did use large quantities of arms from other sources, so that it would not be out of place to introduce British Vickers, American Brownings, or various types of captured (or previously purchased) German types.

Russian Maxim, PM 1910

This was a development of the original Maxim, as was the Vickers. The version shown here was the final type with the water entry port on top of the barrel. It was used all through the war, although steadily replaced by later types.



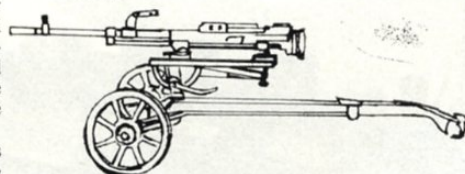
DS 1939

Designed by Degtyarev and Shpagin, this was a rifle calibre medium gun based on the heavy DShK 1938. It was superseded by the SG 1943, which was a much more satisfactory gun.



SG 1943

Supplanted the DS 1939 in 1943, and continued in service until the end of the war, development continuing afterwards.



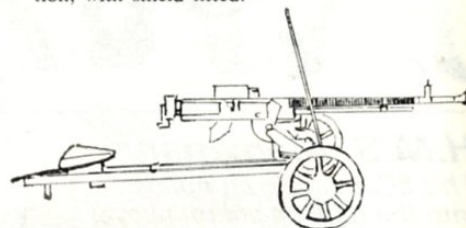
DShK 1938

Of 12.7 mm calibre, this was the standard heavy machine gun throughout the war, also appearing as the secondary armament on AFVs. The first three were all of rifle calibre

(7.62 mm), and could be found mounted on either the older Sokolov mounting, with fixed wheels, or the later Universal mountings, which were true tripods, but still with detachable wheels. The Russians were very keen on wheeled mounts for their heavy infantry weapons, using them on mortars as well as machine guns.

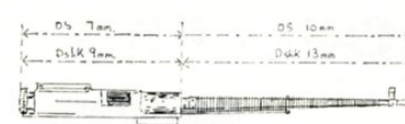
The PM 1910 is shown on the Sokolov mounting, the DS 1939 on the Universal mounting as a tripod with wheels removed, and SG 1943 on the same, showing the tripod legs brought together as a trail with a small seat on the centre leg. A steel shield could be fitted to all types.

The heavy 1938 type also had a form of the Universal mounting, but because of the size and weight of the gun this mounting was not interchangeable with those of the medium types. In the tripod form, the legs extended to provide for anti-aircraft fire, as did the mounting issued with the SG 1943. The sketch shows the 1938 model in the 'low' position, with shield fitted.



Modelling the guns

It is best to discard the machine gun provided in the Airfix Russian set. Both it, and its mounting, are far too small. The Maxim type gun was nearly 4 feet long overall which, taking a scale of 4 mm : 1 foot, gives a model length of about 15 mm. However, we have an excellent gun in the Vickers of the 8th Army set. All that is required is to snip off the present water entry port, and substitute the head of a small pin, driven into the top of the barrel as shown. Also, the existing muzzle must be cut off and



All drawings and numbers keyed to references in text.

Drawings are not to scale.

A: DS and SG gun lengths.

B: Universal Mounting.

C: Sokolov Mounting.

replaced by a section of pin set low on the front of the casing. The gun is cut off the 'Vickers' mounting leaving the projecting plastic boss below. The Maxim is shown mounted on the Universal, and the Sokolov mounting, in the latter case, being pulled along en route to a fresh position.

All the other guns are built up in a similar way, the basis being a rectangular piece of 60 mm plastic card cut and filed to represent the main body of the gun incorporating the breech mechanism and feed, while the barrel is a suitable sized pin let into the end of the plastic and leaving the head to be filed down to represent the flash hider. A smaller piece of wire is fitted underneath the barrel in the same way for the SG and DShK, while the DS and DShK have very thin wire round the barrel to simulate the cooling fins.

Sketch A shows the construction. The final shaping of the breech is best done after the barrel is firmly fixed, as is attaching of any further detail to the actual gun. All these types had a spade grip and this is best carefully filed from the solid plastic.

Mountings

The Universal mounting is straightforward, the legs are made of strips of 20 mm plastic 18 mm long, the two outer legs being glued either side of a 60 mm block of plastic at the front, this block also carries the axle. The centre leg is butted against the rear of the block and the two outer legs are brought against the centre one at the rear and glued. The seat is a small triangular piece of plastic glued on to the centre leg. The wire axle is 15 mm long overall, and the wheels are made from slices of plastic knitting needle 6 to 7 mm diameter. On the model shown here spokes have been represented by eight holes drilled around the face of the wheels, and then elongated by using a piercing saw blade as a fine file. A small circle of 40 mm plastic is cut and glued to the top of the legs to take the gun. Sketch B should show all that is needed.

The Sokolov mounting is more difficult to model, and sketch C shows the method of construction. The basis is a piece of 60 mm plastic card, trimmed to a slight curve and then filed at front and rear to leave projecting lugs, the front pair of which are drilled to take the axle, while the rear pair would have the U-shaped trail attached directly to them. This is impracticable in this scale, so make up the trail from soft wire and file the ends down to a point to be fitted into holes in the main block. The card turntable for the gun mounting completes the job.

For the DS mounting I have cheated, and used the mounting from the 1914 German MG to show this type in the tripod position, as distinct from the 'trail' position, which has a Maxim mounted on it. I say cheated, as the legs of this mounting are not long enough, and those who wish to represent the correct position should use 18 mm legs, but splayed out more than on the mounting shown. This brings the gun up rather higher than normal, and in this position it is capable of AA use, as is shown on the final one to be described, which is the mounting for the heavy DShK seen here in the AA role. Wire is used for the legs, the rear leg being pressed into a block of 60 mm plastic, while the two front legs are made of one piece of wire passed through a hole in the block, and then bent round to give the correct splay. Legs should be 20 to 21 mm long. The gun is mounted as for the others, but a shaped piece of plastic is glued between the mounting and the gun to give the elevation.



Above: Another view of the Maxim PM 1910; developed from the original Maxim, it saw service with the Russian forces throughout the war.

Figures and finishing

The figures shown can all be recognised as standard from the Airfix Russian Infantry set except for the left-hand figure pulling the Maxim, who is a sub-machine gunner with his gun removed, and the arm cut off and repositioned as shown, using a double-pointed pin to re-attach the arm to the body. The gunner on the heavy MG is the bomb thrower, but a better conversion may suggest itself by experiment. The third member of the moving team is the normal marching rifleman with an ammunition box made of 60 mm plastic carried in his left hand by a thin wire handle pushed into the plastic and running through a hole in the hand.

Ammunition belts are made of thin card, embossed with imitation 'rounds' by pressing between the jaws of a small file, and running from the ammunition box shown in the set to the breech. These belts should be coloured in gun metal for the later type guns, and khaki or grey to represent fabric, for the Maxims. A touch of brass colour is added at the rear of the belts to represent the ends of the rounds. It is possible to make up better looking belts by glueing pin heads on to the belt, leaving the width of a pin between each round. I have done it, but time is sometimes short for preparing models for the next encounter! The left-hand figure in the moving team has a belt hanging around his shoulders; in the position shown it is convenient as it hides any sign of the re-joined arm.

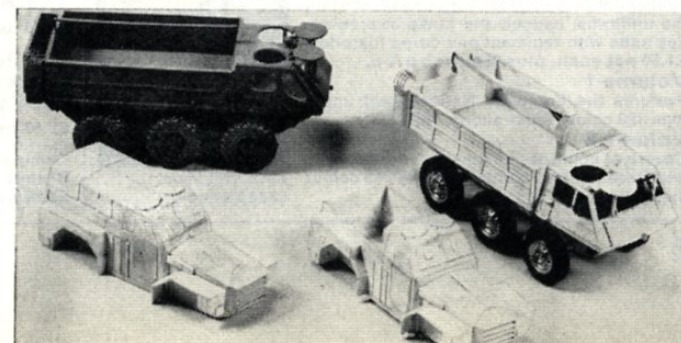
The two guns shown in ground action, and the ammunition carrier, are shown on the standard bases for the Research Group Infantry Action Rules, which define fields of fire and visibility for various weapons in different positions.

Apart from use with the rules, a useful feature of these standard bases is that the thick plastic bases can be cut off, and the figure attached directly to the card base, as shown here. Remember to rough up the surfaces of the feet and other parts of the figure which are to be attached to the base, and use clear Bostick, applying it to both parts to be joined, leaving for a couple of minutes before attaching the figure.

Right: Close-up of models described in text. From left to right: PM 1910; DS 1939; DShK 1938 on anti-aircraft mount.



Right: J. D. Pickles of Bradford, Yorks, sent us these pictures of models under construction in 1:76 scale for his AFV collection. The excellent workmanship is apparent from the view of the unpainted plastic card bodies. Top left is a completed Stalwart, with an unpainted crane-fitted Stalwart on the right. Wheels for these models come from small die-cast cars. In front can be seen a Humber 1 ton 'Pig' armoured truck and a Hornet as used for the Malkara missile.



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Basic layout planning

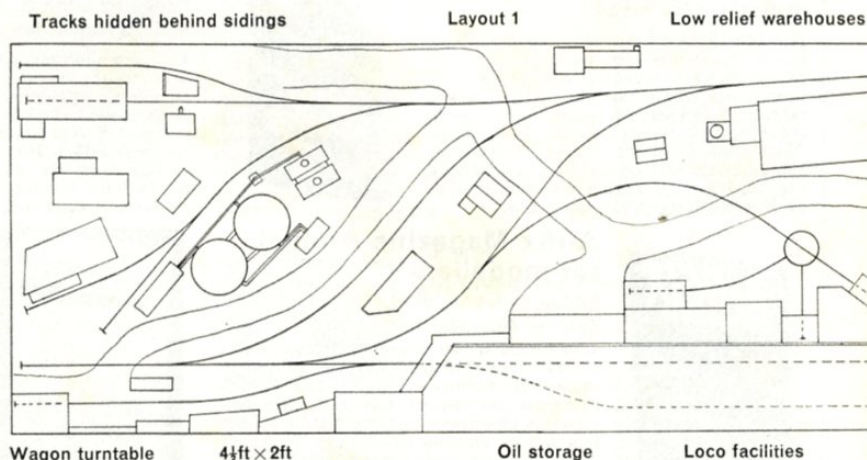
BY MICHAEL ANDRESS

IN the last part of this series I discussed one solution to the problem of fitting a layout into a narrow space, the branch line terminus. This can make a very appealing model and over the years many of these layouts have been built. However, if you want to retain a prototype atmosphere, the operating scope may be rather limited with only a few trains a day on the timetable. An alternative scheme which is well worth some consideration if you would like something a little different is an industrial railway. You will, of course, be rather restricted in the range of locomotives you can use; all the larger types are quite unsuitable, and passenger traffic will be either non-existent or limited to workmen's trains, but the goods traffic can be as varied as you wish.

It is possible, without loss of realism, to pack a great deal of track and numerous structures into even a small space. After all, prototype industrial areas are often cramped with maximum use of the available land, and with many buildings close together; sharp curves and possibly also steep grades are often needed on industrial trackage. Such a model will keep its interest both in construction (lots of super-detailed structures can be fitted in when you get around to building them) and in operation (plenty of scope for tricky shunting problems).

One form of trackplan we can use is the zig-zag or switchback pattern. Layout 1 is an example of this scheme and is supposedly part of the railway system within a large industrial plant, for example a steelworks, shipyard, etc. Alternatively to give even greater variety in the traffic it could be an industrial area with several different concerns (factories, warehouses, oil storage depot, chemical plant, and so on) close to each other. By having one siding serving two or more different industries, shunting becomes even more interesting and complicated. The line at the back passes between two buildings and supposedly joins up with the general railway system to and from which the traffic comes; in fact this line serves a small 'fiddle yard'. Here trains are made up and are then brought

Above: This small industrial layout shown under construction, built by Chris Ellis, is a variation of the idea shown below. It is 5ft x 1ft and is planned so that the lower left and upper right tracks will join up later to adjacent baseboards. Note the diagonally placed loop line. The sidings will eventually all serve industries. Unlike the layout below, this one doesn't have hidden sidings since these are planned for an adjacent board.

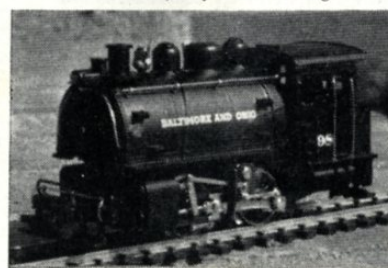


out and the vehicles distributed to the various sidings, perhaps according to some prearranged scheme.

A small engine shed with coaling and watering facilities (or oil refuelling if you have diesel locomotives) adds interest without taking up much space. I've placed it at the front of the layout so that this area of railway interest is shown to good advantage. The buildings at the back of the layout concealing the 'fiddle' sidings are modelled in low relief. To give an even greater feeling of depth you could erect a backdrop behind the 'fiddle yard' with painted buildings to be visible over and between the low relief structures.

I have included a feature, mainly for scenic purposes, which although widely used in prototype form is rarely seen as a model, a wagon turntable. This type of small turntable provides access to tracks where there would not be room to fit points nor space for the curve away from the main siding that would be required. They are often used to enable wagons and vans to be moved

Use small locomotives on small layouts. This Rivarossi HO Baltimore and Ohio 'Little Joe' is ideal, only 4 inches long.



into buildings for unloading purposes. Of course, engines cannot use these turntables and the wagons must be moved by manpower, still in use even now in some yards, wire and capstan, horsepower, or by tractor, truck, etc, fitted perhaps with a beam for pushing. The only wagon turntable commercially made is the Peco 009 model, but it would be easy to build one for standard gauge, it can be a non-working model for simplicity if you wish.

If you have more length available this switchback scheme can be stretched out to fit with great advantage in the length of run as for each foot increase in baseboard length the run will be 3 feet longer.

For Layout 2 I have chosen a mining theme in 009 with ore from the mines in the hills being brought down to the valley where it is processed and transferred to the standard gauge for shipping out. As we have the three main sections of our run adjacent and more or less parallel to one another we must separate them as much as possible both actually and visually for the most realistic effect. The narrow baseboard limits much spreading out of the tracks in this direction but we can separate them in height and we should do this as much as is feasible. This will make the gradients fairly steep and you may have to keep your trains short; these are both advantages rather than disadvantages as the steady descent from the mines will give the impression that the line really is going somewhere and the short trains will make the layout look bigger and the scenery more impressive. Hiding parts of the track by

Continued on page 446

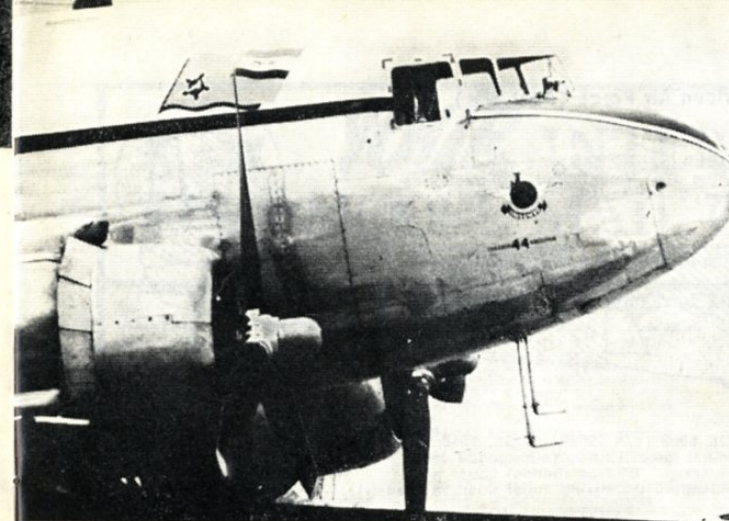
AIRFIX magazine

SAAF Dakotas

Colour schemes and markings

described by

Richard Gardner and Dave Becker



Left: VIP Transport, serial number 6882 of 44 Sqn. Flag on fuselage is pale blue with South African National flag in the upper right canton and a blue/gold SAAF 'castle' in the lower left canton.

THE first of the two wartime SAAF Dakota squadrons, No 28, was formed at Almoza, Cairo, on June 1, 1943, from personnel of 34 and 35 (MR) flights, the unit having eight C-47s by August 1943. The second squadron, No 44, was formed from 43 Sqn on March 12, 1944, also at Cairo, and together flew much of the men and material transported in the North African and Mediterranean theatre of operations. Meanwhile, in the Union, 5 Wing (SAAF) received its first Dakota, 42-23630, to supplement Ju 52s, Ju 86s and Lodestars, and this was ferried from Accra on June 21, 1943, to become G801 in SAAF service (42-23630 was allocated RAF serial FD874 but it is doubtful if this was ever carried).

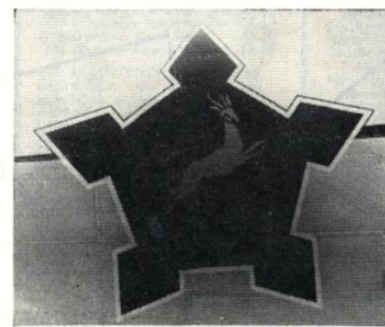
Both units had detachments scattered throughout these theatres but in June 1944, 28 Sqn was based at Maison Blanche, Algeria, and 44 at Bari in February 1945, with the Balkan Air Force, dropping supplies to partisans and evacuating Yugoslavian casualties. No 44 was disbanded at Bari on December 6, 1945, but 28 Sqn continued and formed an integral part of the shuttle service undertaken by No 5 Wing, SAAF, ferrying troops to the Union until January 1946.

During the World War 2 period and the early post-war years, an overall Olive Drab finish or a Dark Green/Dark Earth finish (both cases with Sky under surfaces) were usual for these aircraft. 'C' type roundels were standard but a few had non-standard fin flashes with equal bars of orange and white and blue. Serials, initially either RAF or USAAF, were later changed to the SAAF system in the batch beginning 6801.

The Dakotas which were supplied under Lease-Lend were settled for after the war and in all about 84 were involved which were of the C-47A and C-47B version, distinguishable externally by their different carburettor air intakes.

No 60 Sqn used a number of Dakotas post-war as photo survey aircraft and these carried that unit's code letters JS in yellow on their Olive Drab and Sky finish (eg, 6859:JS-Y, 6837:JS-X).

The earliest marking change was the addition of underwing serials but soon after, expensive, heavy, and now unnecessary camouflage finishes were removed, leaving the aircraft in bare metal finish. 'A' (and in a few cases 'C') type roundels were



Left: Standard 'castle' of the SAAF, other later versions of this have the springbok's head facing forward with no features, similar to type used in the roundels.

standard, with 60 Sqn using yellow codes and 28 using black codes. Examples of 28 Sqn codes were 6835:N-OD, 6856:L-OD and 6843:A-OD (all marked forward of the fuselage roundel).

Between September 22, 1948, and April 25, 1949, 28 Sqn took part in the Berlin Airlift. However, as RAF aircraft were used, details of this operation (already well publicised) fall out of the scope of this article.

Some Dakotas later incorporated 'D' type roundels and one of these (at least) was modified as an ambulance aircraft. Special markings were laid down for this role. This comprised a red cross on a 45 inch diameter white disc to be placed on the rear door 5 inches below the centre line forward of the roundel and in a corresponding position on the other side of the fuselage. In addition a further red cross with arms 45 inches long x 15 inches wide was placed on a 52 inch white disc on the underside of the centre section, a corresponding one being marked on the cabin roof. 6853 was the serial of one of these.

The introduction of the 'springbok' marking followed in the 1950s. Two VIP C-47Bs were named, 6868 being *Rustig* and 6852 *Fleur*. No 6868 was unusual in having the two rearmost windows on the starboard side in close proximity (a number of RAF and USAF VIP C-47s also have this feature).

By this time 60 Sqn no longer existed but in November 1953, 44 Sqn was re-formed as an ACF Dakota squadron.

In 1955, the VIP aircraft of 28 Sqn began to receive white fuselage tops and fine, edged with a Roundel Blue cheat line. At this early stage the white top was a distinctly cream shade, but later, pure white was used. As this new scheme spread to the other squadron aircraft, code letters were discontinued, and anti-glare panels on nose and engine nacelles, formerly grey, were finished in matching blue (an ultramarine shade). Many of the SAAF's Dakotas had by this stage been sold to civilian operators—indeed, all of South African Airways' Dakotas were ex-SAAF.

The two Daks used for overseas flights, 6854 and 6848, had black de-icer boots on all surfaces as well as the legend 'South African Air Force/Suid Afrikaanse Lugmag' on either side of the cabin roof.

A third VIP Dakota was added to the VIP Flight around 1958, a C-47B serialised 6857 with the name *Klein Tierberg*, the same as that of the VIP Ventura which it replaced. Only the inner halves of the engine nacelles of the VIP Dakotas were painted blue.

In February 1956, orders were issued for the new 'castle' marking to be introduced but it was some considerable time before this became apparent. At first the diameter of this remained the same as that of the previously applied roundel, but later this was enlarged.

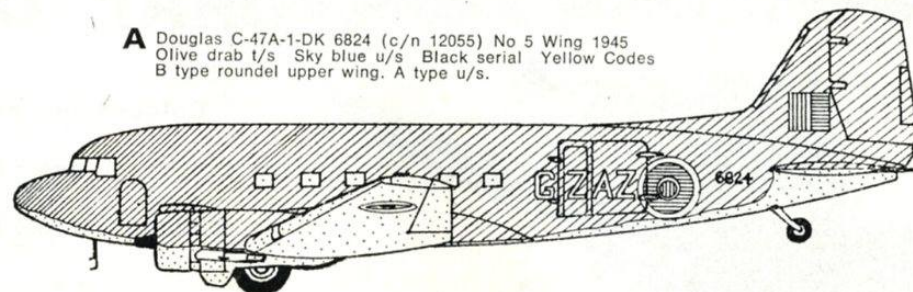
Underwing, the marking diameter was 54 inches, with its centre 124 inches from the inboard extremity of the aileron. Serials were applied in black 48 inch x 30 inch figures in the standard RAF positions, parallel to the trailing edge. The 'last two' of the

Drawings overleaf

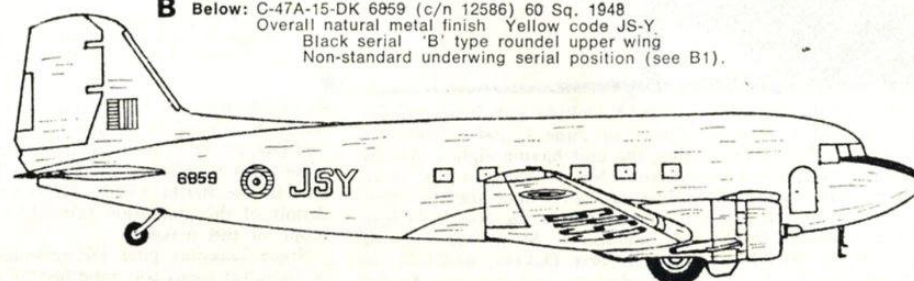
Text continues on page 442

Douglas Dakota C47s of the South African Air Force (Post War)

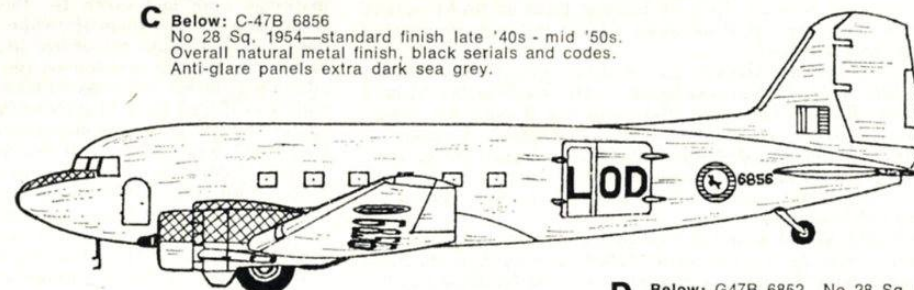
A Douglas C-47A-1-DK 6824 (c/n 12055) No 5 Wing 1945
Olive drab t/s Sky blue u/s Black serial Yellow Codes
B type roundel upper wing. A type u/s.



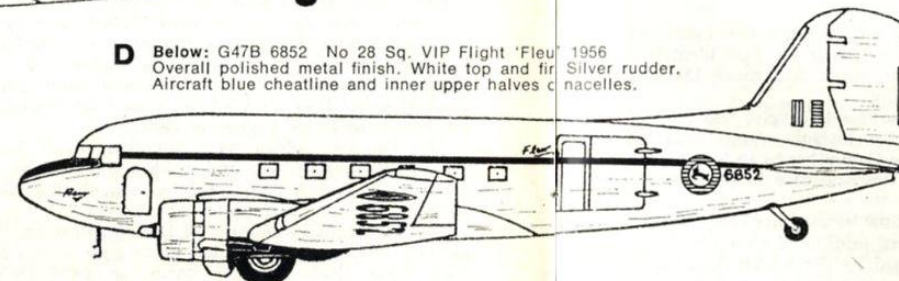
B Below: C-47A-15-DK 6859 (c/n 12586) 60 Sq. 1948
Overall natural metal finish Yellow code JS-Y.
Black serial 'B' type roundel upper wing.
Non-standard underwing serial position (see B1).



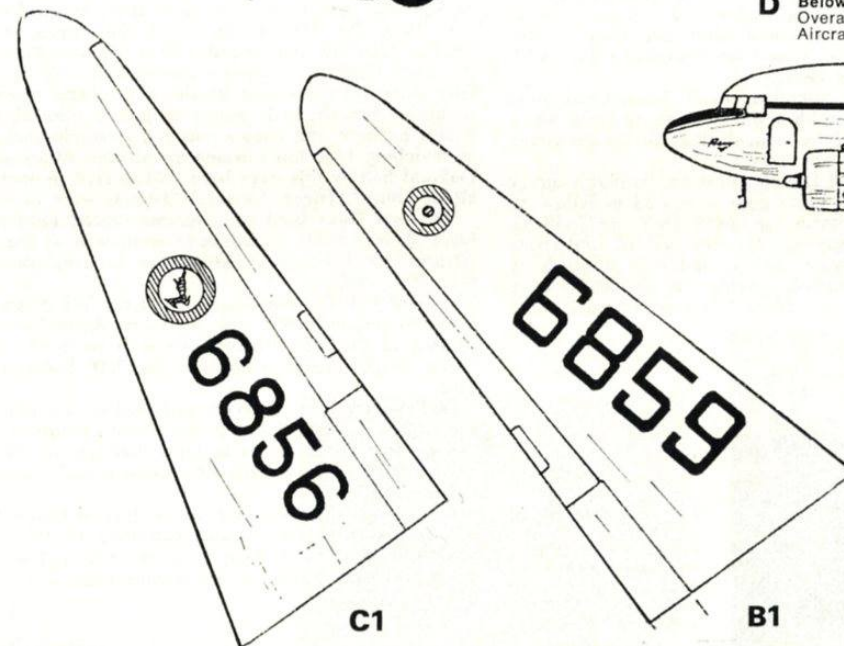
C Below: C-47B 6856
No 28 Sq. 1954—standard finish late '40s - mid '50s.
Overall natural metal finish, black serials and codes.
Anti-glare panels extra dark sea grey.



D Below: G47B 6852 No 28 Sq. VIP Flight 'Fleur' 1956
Overall polished metal finish. White top and fin Silver rudder.
Aircraft blue cheatline and inner upper halves of nacelles.



Standard aircraft have whole upper surface of nacelles painted blue
Under surfaces as in C1. and an overall silver painted finish.



C1

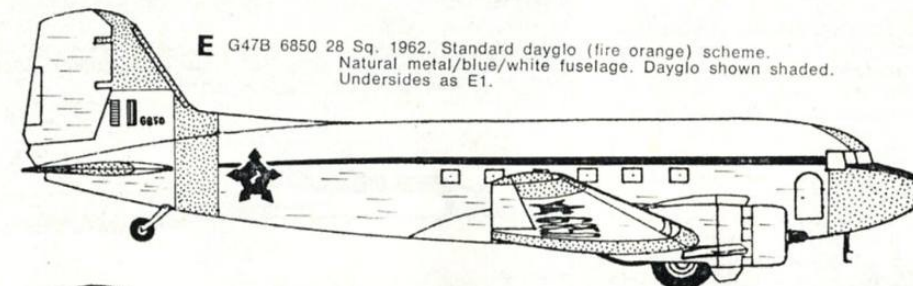
B1



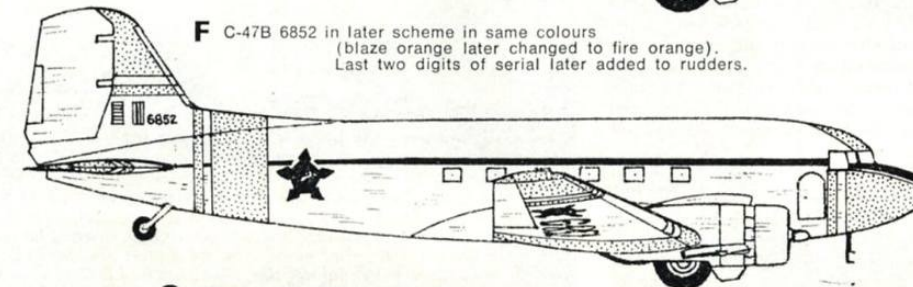
Standard scheme for current 44 Sq. aircraft.
Orange tips.

Drawings by Richard E. Gardner Research by Dave Becker

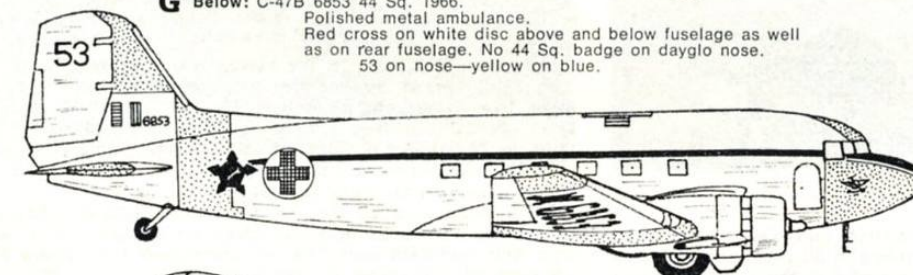
E G47B 6850 28 Sq. 1962. Standard dayglo (fire orange) scheme.
Natural metal/blue/white fuselage. Dayglo shown shaded.
Undersides as E1.



F C-47B 6852 in later scheme in same colours
(blaze orange later changed to fire orange).
Last two digits of serial later added to rudders.



G Below: C-47B 6853 44 Sq. 1966.
Polished metal ambulance.
Red cross on white disc above and below fuselage as well
as on rear fuselage. No 44 Sq. badge on dayglo nose.
53 on nose—yellow on blue.



E1 Standard dayglo scheme
for transports and
ambulance aircraft.



F1 VIP dayglo scheme.





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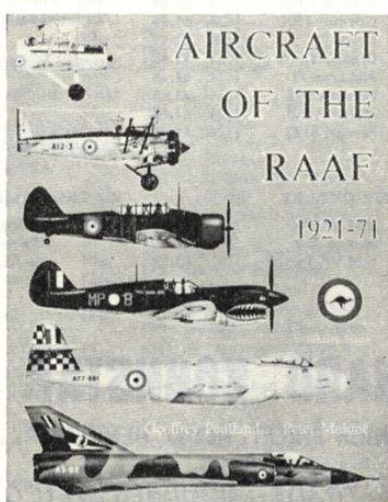
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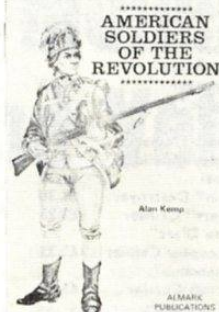


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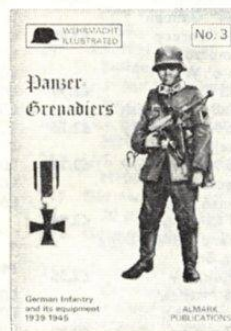


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- MALC-1 Marlburian Dragoon
- MALC-2 Marlburian Horse Grenadier Charging*

INDIAN NAPOLEONIC

- CI-1 Bengal Infantryman Advancing
- CI-2 Gurkha Infantryman Advancing
- CI-3 Afghan Tribesman Advancing
- CI-4 Indian Sudhaina Sikh
- CI-5 Egyptian Infantryman Advancing
- CC-1 Bengal Lancer Trotting*

BRITISH NAPOLEONIC

- BN-4 Light Infantryman Officer
- BN-5 Line Infantryman Firing
- BN-6 Highlander On Guard
- BN-9 Highlander Advancing
- BN-10 Artilleryman Carrying Bucket
- BN-11 Foot Artilleryman Holding Rammer

BRITISH NAPOLEONIC

- BN-14 Guard On Guard
- BN-16 Guard Officer
- BN-19 Fusilier Officer
- BN-21 Line Infantryman Officer
- BN-22 With Colours
- BN-28 Marine Advancing
- BN-29 Marine Officer
- BN-30 Horse Artilleryman Carrying Cannon
- BN-33 Horse Artilleryman Sighting Gun

BRITISH NAPOLEONIC

- BN-35 Light Infantry Officer
- BN-36 Highland Piper
- BN-37 Line Infantryman Mounted Colonel*

BRITISH NAPOLEONIC

- BN-1 British Hussar*
- BN-2 Royal Scots Greys*
- BN-3 British Heavy Dragoon*
- BN-6 Household Cavalry*
- BN-7 Light Infantryman On Guard
- BN-7 Line Infantryman Lunging
- BN-20 Line Infantryman Advancing

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BOOKS FOR WAR GAMERS

- Napoleonic War-game Rules 35p
- English Civil War Rules 35p
- Campaign Maps 30p
- World War II Rules 45p
- American Civil War Rules 35p
- Battle Practical Wargaming £1.05
- Introduction to Battlegaming £1.25
- Sea Battles £1.25
- Model Soldiers £1.30
- Old British Model Soldiers £1.50
- Advanced War Games £2.50
- Air War Games £1.50
- Naval War Games £1.50
- War Games Campaigns £1.75
- How To Go Collecting Model Soldiers £2.00
- Wargames 25p
- Infantry Uniforms 1724-1855 £1.50
- Infantry Uniforms 1855-1939 £1.50
- Military Uniforms Of The World £1.50
- Cavalry Uniforms At Regiments £1.50
- Waterloo £1.75
- British Infantry Regiments £1.35
- Uniforms Of Marlboroughs Wars £1.25
- French Army Regiments £1.50
- French Lancer Regiments £1.75
- French Napoleonic Artillery £1.50
- German Combat Uniforms £1.25
- The Waffen "SS" £2.25
- German Army Uniforms & Insignia £4.25
- Badges Of The British Army £1.50
- Buttons Of The British Army £1.50
- British Cavalry Standards £1.75

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NEW ALMARK BOOK

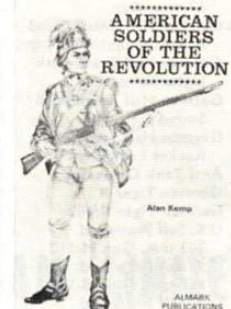
AMERICAN SOLDIERS OF THE REVOLUTION

By Alan Kemp

This fine new book covers the American troops who fought on both sides in the War of Independence. More than half of the book deals with Patriot regiments, from the various contingents of Minute Men to the crack regiments like Morgan's Rifles, Infantry, Cavalry, Artillery, and Service arms are covered. In part two of the book the American Loyalist regiments are featured, ie, those who fought on the British side in the war. Infantry and Cavalry regiments are described and their uniform is illustrated. Apart from the uniform colour plates a major feature is the coverage of regimental flags, some of which are shown in full colour. We understand that subsequent volumes will deal with British and Allied troops of the War of Independence.

DE-LUXE CASEBOUND EDITION £2.00

PAPERBACK EDITION £1.50



BMW MODELS, 327-329 HAYDONS ROAD, WIMBLEDON, LONDON, S.W.19 01-540 7333/4

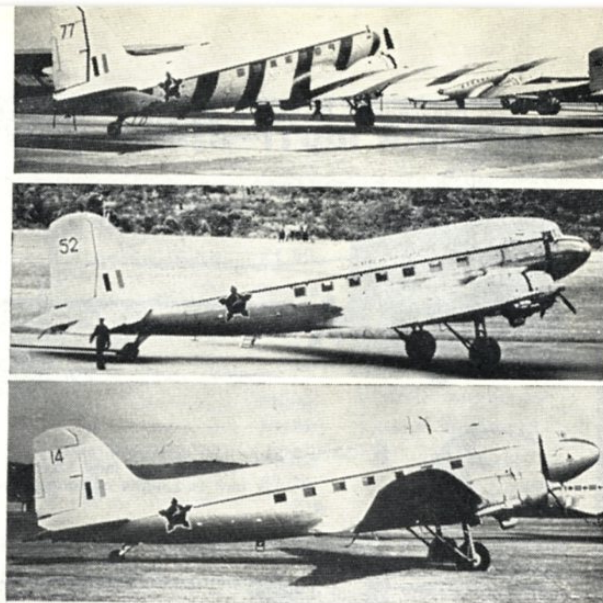
SAAF Dakotas—from page 434

serial were repeated in black figures just below the anti-glare panel on the tip of the nose. Three Dakotas in this scheme from 28 Sqn (including 6843 and 6861) took part in 'Oefening Vlerk' (Exercise Wing), the first post-war Army/Air Force exercise in the Orange Free State, a province of the Republic.

From 1960-61, Dayglo was introduced on Dakotas in two different schemes. The standard scheme was as follows: Entire nose (less anti-glare), a panel above the cockpit, wide band around rear fuselage, upper half of fin, tips of wing and tail surfaces and a further band around wings just outboard of the engine nacelles, all in dayglo. The fuselage serial was re-positioned 2 inches forward of the fin flash. This scheme was worn, plus its standard red crosses by the Dakota ambulance as well.

VIP Dakotas had in addition further narrow bands of dayglo placed parallel to and behind the nose and rear fuselage bands, below the fin band and inboard of the wingtip and stabiliser tip bands. The inner wing bands remained unchanged. Proportions of the thicker bands on the VIP aircraft differed from the standard scheme. Initially, blaze orange was used but later this was replaced by the redder fire orange. In both cases, bands did not encroach on to control surfaces.

With the retirement of the Ventura from service, the SAAF lost their Ventura target tug conversions. Consequently, in late 1960, a C-47A, 6877, was modified into a target tug, carrying the



Above, top to bottom: Target tug C-47A, serial no 6877 of 25 Sqn; stabilisers are all black and stripes on wings are parallel. VIP Flight 'Fleur', serial no 6852, in polished metal/blue/white finish with blue cabin lettering. C-47A-1-DK serial no 6814 of 44 Sqn in standard current scheme with orange wing and tail tips, blue strip and anti-glare panel. Recent additions to roof aerals, silver finish more usual. Undersurfaces as drawing on previous page. Left: Dakota no 78 in standard 'castle' markings.

suited to the MR task, ie, the Piaggio P166S Albatross.

In 1963, No 44 Sqn became a combined CF/PF squadron flying from Swartkops aerodrome. By 1965, many of 44 Sqn's Daks sported squadron badges—and had acquired many new Daks, as 28 Sqn had re-equipped with C-130Bs. Some Daks, such as 6837, had dispensed with Dayglo, which was a problem to maintain being very prone to fading.

Other units such as the Air Operations School, CFS, and various station flights also had Daks on strength, 6879 being with AOS and 6884 with CFS (the latter force-landed near Port Elizabeth on November 16, 1967).

In 1965, Dakotas began appearing with the last two figures of the serial in large black figures on the rudder for easy identification and, late in the following year, more and more Dakotas appeared without the Dayglo markings.

By 1967 many 44 Sqn Daks, now without Dayglo, had the tips of wings, tail, fin and rudder painted in insignia orange. In 1968, the Cape-based Dakotas of Maritime Group began to follow suit, differing in not having the orange tips and also in deleting the fin serial.

Yellow on black, and black on yellow 'rescue' markings became standard and some Dakotas displayed additional roof aerals.

VIP Dakotas could be distinguished by the SAAF flag, highly polished finish and legend above cabin windows, and by 1970,

Continued on page 451



ML winch from a Ventura under the centre section plus other assorted target tug gear.

Apart from the white top, blue stripe and silver rudder which was retained, the aircraft was finished in all over training yellow with 3 ft diagonal black stripes placed 6 ft apart, resulting in a unique and striking-looking aircraft. 6877 was attached to the Ysterplaat AFB station flight and when this unit was re-numbered 25 Sqn, joined its strength, with which it serves to this day.

On December 15, 1961, nose serials were added, being the 'last two' only, in 8 inch yellow figures on the blue of the anti-glare panel. The blue anti-glare panels on the motors were phased out after November 24, 1960, though this in effect was slow.

Not all the Daks switched to these schemes and one or two at this stage were still in all-silver painted finish (though marking and serial re-positioning had taken place, as on 6825, a C-47A).

In October 1962, 27 Sqn was formed as a Short Range Maritime Recce Sqn, using the venerable old Daks, some being improvised later with racks for stores under the centre section and it was not until 1969 that these could be replaced by aircraft better

Below, left to right: 44 Sqn badge: wings are white with black edging. Springbok: brown with black hooves and eye. Sea: blue with green continents, yellow outer edging to world. Ribbon below: blue with yellow lettering. ESK 44 Sqn. is black. 21 Sqn aircraft serial no 6852, 'Fleur' in black, 21 Sqn. badge green/gold, Springbok head and bomb in centre. 21 is written in Roman numerals. Motto: 'onoor winlik', ie, cannot be beaten. SAAF National marking circa 1950, colours are ultramarine and white with orange springbok.



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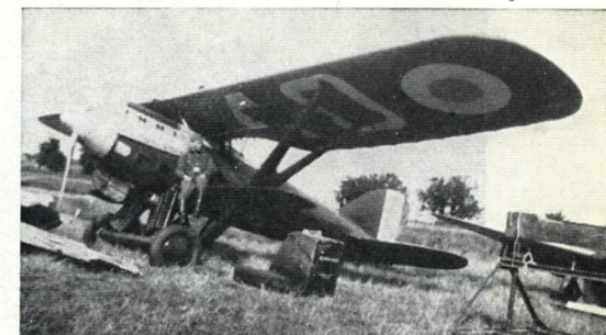
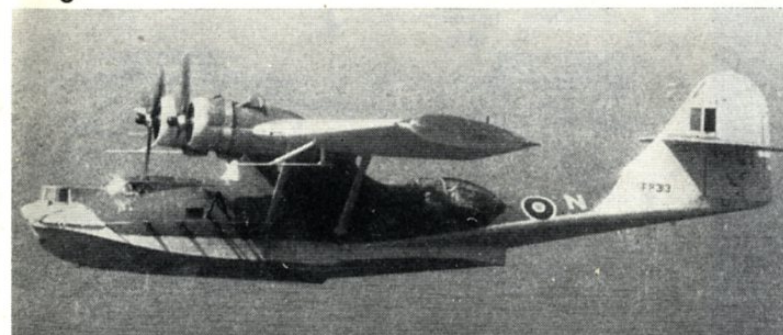
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With the exception of the two pictures of RAF aircraft (credited individually), all this month's contributions come from A. R. Chapman and show German and French aircraft at the time of the invasion and occupation of France in May/June 1940. (1) A Junkers Ju 87B in splinter camouflage (or possibly plain dark green) with Helblau undersides on a French airfield. (2) A late production Spitfire IX MJ171: ?-GZ of 32 Sqn, with pointed spinner and clipped wings. Spinner is black and the motif under the cockpit appears to be a stylised shamrock presumably in green (Sqn Ldr G. N. B. Miller). (3) A magnificent view of a Heinkel He 118 on an advanced landing ground in France and partially draped in camouflage netting. It appears to be finished in dark green and Helblau. Coding on fuselage is obscured by the net. (4) A Bloch MB 174 is examined by Luftwaffe personnel after the occupation of Abbeville. (5) A wrecked Mureaux 117, coded 64 under the wing, also at Abbeville. (6) A Messerschmitt Bf 110C-4 A2+BB of ZG 52. (7) Coded 50, this machine has eluded our reference books. Can anyone identify? (8) Catalina IBFP313: N of 265 Sqn is shown in flight between Pamanzi and Diego Suarez over the Indian Ocean in 1942. Note full ASV aerals. Name in script on nose appears to be 'Jane'. Finish is dark sea grey/slate grey/white (Christopher Baty).

8



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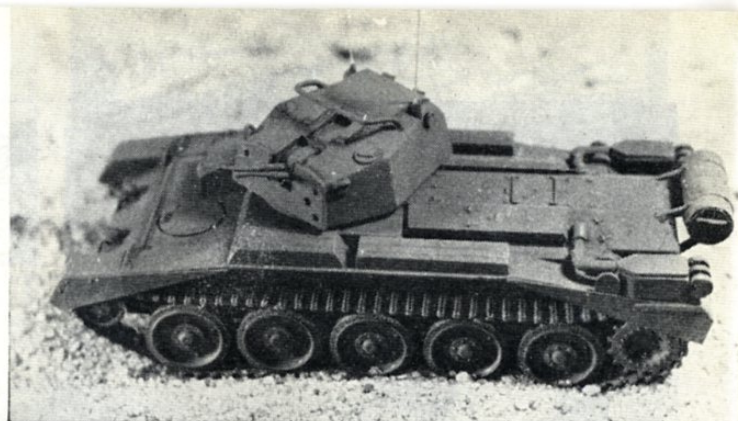
photoPAGE

More rare pictures from readers with captions by Michael J. F. Bowyer. A free Airfix kit is awarded for every picture published, but please note that there is usually a delay of some months before publication due to the limited space at our disposal.

Crusader AA Tank

Interesting conversion using plastic card and scrap

by Gerald Scarborough



Above: Completed model of the Crusader tank showing the new turret made from plastic card as described in text.

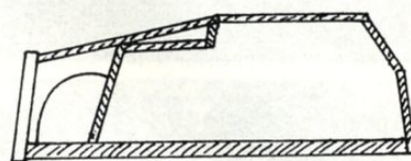
THE new Airfix Crusader kit gives yet another base for some simple little conversions and one of these that I've tackled is the Crusader AA tank. Their use was severely limited as the numerical superiority of the Allied air forces left them few targets after the Normandy invasion, for which they were specifically adapted.

There are just a few points about the kit itself; it is about 3 mm too high and 9 to 10 mm too long, but as I have not personally measured the genuine article and am only going on published dimensions, I stand to be corrected. Nevertheless, the model is very nicely moulded and goes together well and looks like a Crusader—and that to me is what matters most. On the other hand, you can carry out the modifications described in the Crusader article in *Airfix Magazine* February 1971.

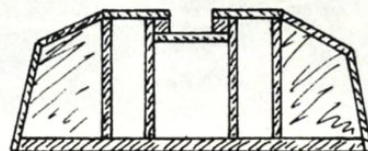
For the anti-aircraft conversion the main alteration is, of course, a new turret mounting a twin Oerlikon 20 mm cannon, but first we must construct the basic Crusader Mk III hull. Parts 70 and 71 are not used and study of the kit parts will show that to make a neater job the locating ridge underneath the stowage

boxes on the hull top, part 20, will need carving away. Also cut off the rear of the track covers to the angle shown on the drawing and carve the sides, under the exhaust expansion boxes, to allow the new dust shields to fit neatly. Another little job to improve the detailing is to remove the headlamp guards and replace these at a latter stage of construction with new parts bent up from lengths of stretched sprue.

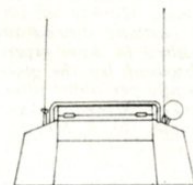
Now continue with the construction of the basic hull, painting as you go, in particular the road wheels, idlers, sprockets and track before adding the new dust shields at front and rear. To seat the top run of the track to the road wheels, try a drop of Copydex, it seems to have worked on mine with no ill effects so far. You could now fit the standard Mk III turret and have a different-looking Crusader as shown in the photographs, or you can go on and make up the AA turret version.



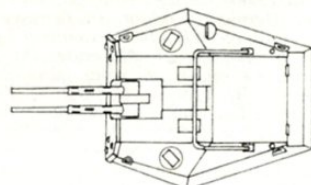
Cross sections of AA turret showing shielding thickness. Not to scale



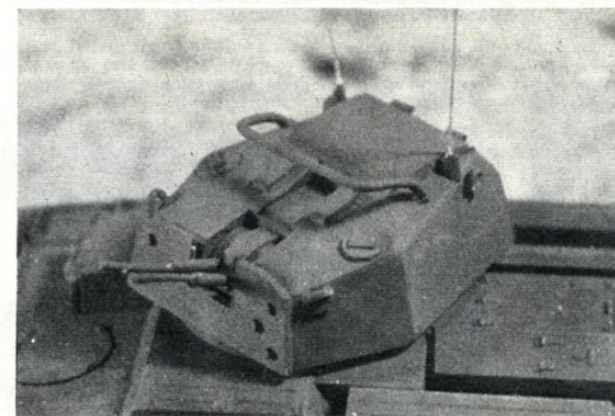
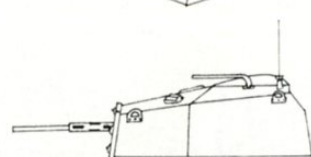
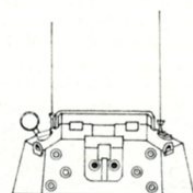
1:76 scale drawing of Crusader anti-aircraft turret



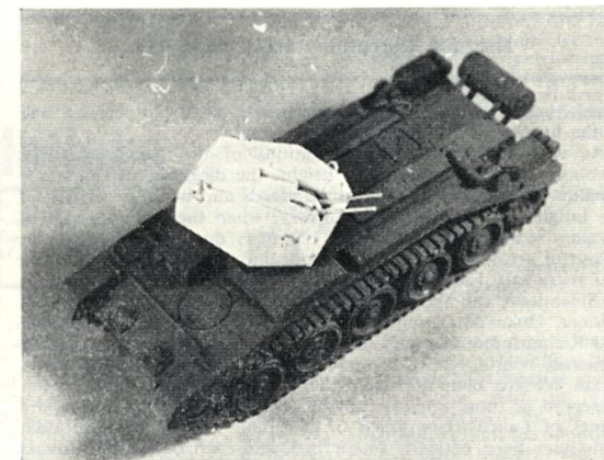
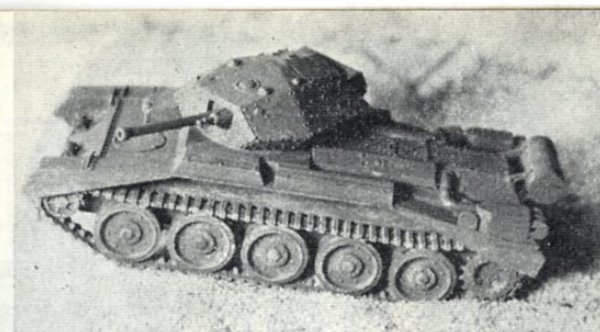
Front shield



Rear shield



Below: Close-up of turret with lifting eyes and rivet detail clearly shown. Note also the twin Oerlikon cannon made from scrap.



Above top left: Normal Crusader kit with modified side shields as suggested in text. Left: Dead side view of the AA tank. Note realistic track sag on this and the Mk III above obtained by using Copydex adhesive on the underside of the tracks. Above: Normal Crusader hull with new plastic card turret just before painting.

This turret looks a fairly complicated shape but its construction should be clear from the drawing, sketch and sectional views. Commence with the base from 30 thou plastic card, accurately cutting out 15 thou undersize all round, 30 thou at the front. This is, of course, to allow for the thickness of the sides and is most important to get right, otherwise you will obviously finish up with an oversize turret. To this base we now add the four identical vertical shapes to give a base on which to build the top and sloping top sides. These must all be absolutely identical and their shape can be taken direct from the side view of the turret, but again allowing for the 15 thou thickness of the top and rear, and the 30 thou of the bottom and front. Add these to the base so that the two inner ones form the inside faces of the cannon mounting

and the two outer come into the correct position for mounting the top, but do ensure they are all vertical. When these are dry, add a flat rear top at this stage (fitting the curved hatch later), the two rear faces and then the gussets, to support the sloping top sides, which you will note run forwards at an angle, to be underneath the join line.

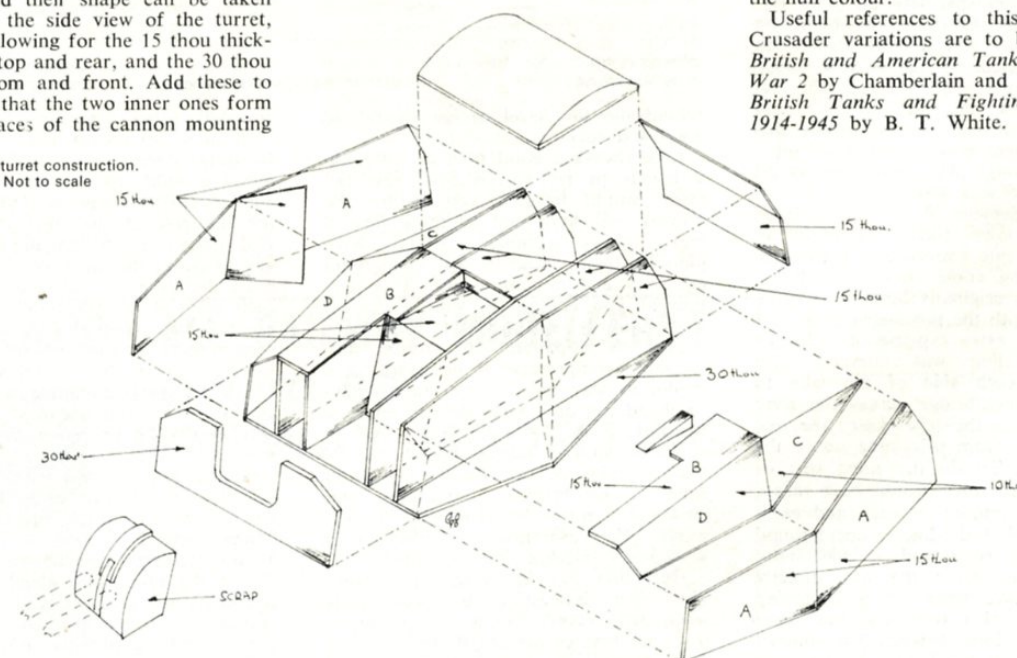
For the next stage add the four side pieces 'A', chamfering the edges where necessary to get a nice, clean fit, followed by the top pieces 'B' and the sloping top

sides 'C' and 'D' from 10 thou plastic card. These can be fitted to overhang at the sides and then trimmed off when dry. It only remains to fit the small inside faces to form the gun aperture, the front armour and the curved top entrance hatch to complete the main assembly.

Final details, the gun barrels, mounting, ventilators, vision blocks, lifting lugs, radio aerials, etc, are as shown on the drawings and photographs of the model. To mount on the hull, drill a hole in the underside and insert a suitable spigot from scrap sprue and then paint to match the hull colour.

Useful references to this and other Crusader variations are to be found in *British and American Tanks of World War 2* by Chamberlain and Ellis, and in *British Tanks and Fighting Vehicles, 1914-1945* by B. T. White.

Basic turret construction. Not to scale

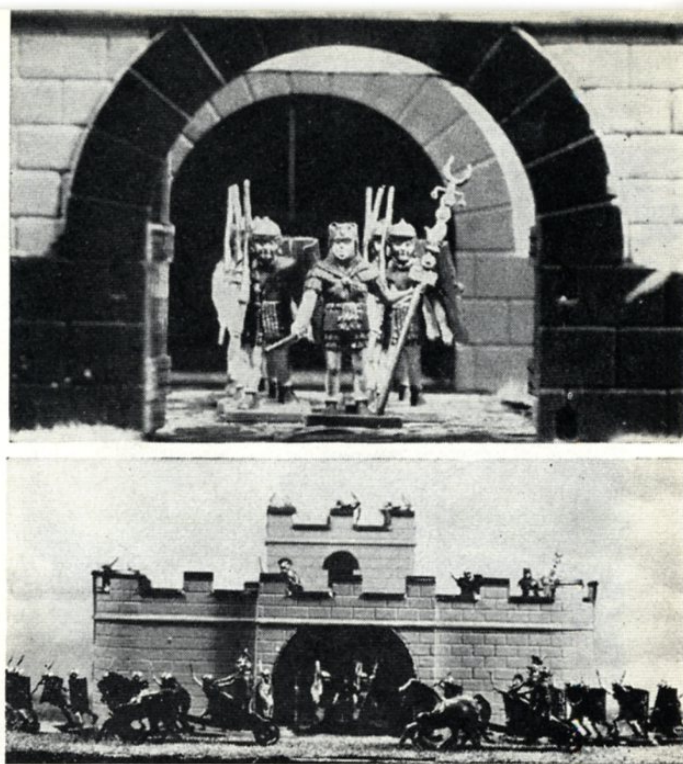


Museum Diorama—from page 419

attach them to the ground by means of a small pin through one of the hooves.

As well as showing the formations of the troops and the encounters of the Battle at its height, the diorama also provides a unique display of the various standards and banners carried by the knights of this period in history, when the art of medieval heraldry was at its best. Over 120 flags decorate the scene in colourful array, as it must have appeared to the opposing armies 500 years ago. Edward IV, with the Yorkist emblems of the Sun in Splendour, the White Rose and Lion of March, his brothers George, Duke of Clarence, under his banner of the Black Bull, and Richard, later King Richard III, with his White Boar, facing Somerset bearing the Beaufort Portcullis and Lancastrian Silver Swan. We are again fortunate that contemporary lists have been preserved of those knights created after the Battle, as well as the names of Lancastrians killed or executed. Their correct heraldic arms have been patiently researched, and each of the individuals can be identified by referring to charts bearing their shields which hang opposite the model. These details have also been incorporated into a booklet which comprises a 'Roll of Arms' of the participants in the Battle of Tewkesbury.

The illustrations on the right show what can be done with a little ingenuity and a good camera angle. The model shown is the standard Airfix 'Caesars Gate' kit with figures to match (T. C. Hammetman.) In the near future we hope to run a series of articles on expanding this kit just as has been done with the Sherwood Castle series just completed.

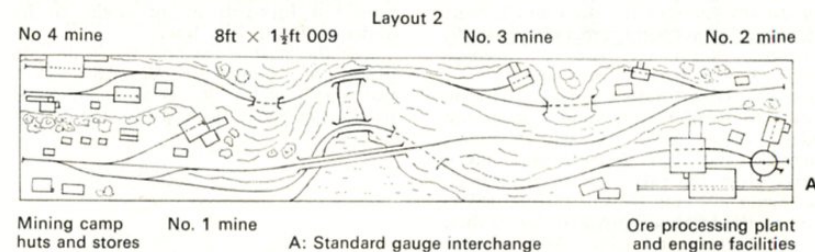


Basic Layout Planning—from page 434

tunnels, trees, buildings, cuttings, avalanche galleries, etc., will help to separate the tracks visually.

These features also split up the run and give the impression of a greater length of travel for the trains. Tunnels are especially effective for this but should be used sparingly on your layout; they are expensive to build on prototype lines and are avoided when possible, particularly on narrow gauge lines where the sharp curves that can be used allow the track to go round rather than through the hills. For this reason I have shown only two short tunnels on my plan, but you could have more if you wish.

The arrangement of the two bridges on the two lower tracks should be an interesting scenic feature and I envisage this as having come about as follows. The line was originally built to link the No 1 mine with the processing plant and to avoid the extra expense of a longer bridge the line was curved fairly sharply on each side of the lake to reach the short bridge across the river where it enters the lake. Later the line was extended from this mine up to the No 2 Mine. To do the same sort of thing with this track would have meant an excessive amount of rock and earth removal to allow the line to curve round to cross the river and it was more economical to carry the line directly across the lake where it is becoming narrow, and also over the low level track, on a long bridge. To support this explanation the banks of the river



behind the low level bridge should be steep and rocky.

It is always a good plan in designing a layout to try to visualise how the scene would have looked before the railway was built and to think how a real railway company would have placed their tracks for maximum efficiency and minimum cost. This may prevent you ending up with a scheme so obviously impracticable that the realism is impaired. Of course considerable compromise is necessary in a model railway but a little thought beforehand can do a great deal to improve the final result.

Traffic on this mining layout will be mainly trains of ore wagons but from time to time stores, explosives, and machinery must be delivered to the mines. You can also run trains with workmen's coaches for the miners.

Operation can be made more complex and interesting by introducing some extra complications. For example, you can restrict the length of trains of fully loaded ore wagons being brought

downhill, either over the whole line, or even more interesting over only a particularly steep section. Thus a train must be split up and taken over this part in two sections, and then rejoined for the rest of the descent. You can also make it a rule that the engine must always be at the front of the train and must therefore run around its train at each reversal of direction where a run around loop is provided, and another engine must be used where there is no loop (at Mines No 2 and 4). The use of a second locomotive as a helper engine over steep sections of the line will also make operating more interesting.

Alternatively if you wish to simplify operation the layout could be modified to replace the track arrangements at Mines 1 and 2 by loops so that there is an uninterrupted run between Mine No. 4 and the processing plant. However, the loops will give a less effective scenic appearance even if they are partly concealed and simplifying operation will make it less interesting.

BOOKS for modellers

Unless otherwise stated, books reviewed are normally available from your local bookshop or from hobby shops which sell books for enthusiasts, including the mail order stockists advertising in this magazine. As a last resort they can be obtained from the publishers whose addresses are given when known. In all cases of mail order, however, suitable postage should be added to the selling prices quoted.

MILITARY

The Connaught Rangers.

Alan Sheppard.

The Arab Legion.

Peter Young.

US Cavalry.

John Selby.

Royal Scot Greys.

Charles Grant.

Men-at-Arms Series, Osprey Publishing Ltd,

Reading, Berks.

£1.25 each.

FOUR new titles have just been released by Osprey in their Men-at-Arms series, in their usual format they cover three out-of-the-ordinary units and one that is known the world over for their headlong charge at the battle of Waterloo. We refer of course to the Royal Scots Greys. This particular book, coming as it does shortly before the release of the Airfix Royal Scots Grey, should be of interest to those intending to model the figure.

All four books have eight pages of colour illustrations and numerous half-tones throughout their texts which is a summarised account of each formation's history and dress during the period of their existence till eventual disbandment or amalgamation.

Uniforms of the American, British, French, and German Armies in the War of the American Revolution, 1775-1783.

Charles M. Leferts.

WE Inc, New York,

distributed in UK, British Commonwealth,

and Europe by Patrick Stephens Ltd,

9 Ely Place, London EC1.

£3.80.

FIRST published in a limited edition of only 500 copies, this highly detailed book became a collector's item in a short time. For 30 years, Lt Leferts devoted almost all his time to this work, researching in archives in Great Britain, France and Germany, and every known source in the

United States. He read Revolutionary orderly books, diaries, old newspapers, and histories for further information that would throw light on the subject. Each uniform plate is accompanied by descriptive text on the history of the unit and colours of the uniform illustrated. A new section on the Continental Army has also been added, and a selection of plates of famous battles and some of the characters involved in the war. This book is quite the most comprehensive we've seen on the subject and should be of great interest to model soldier enthusiasts.

US Cartridge Company's Collection of Firearms.

WE Inc, New York,

distributed in UK, British Commonwealth,

and Europe by Patrick Stephens Ltd,

9 Ely Place, London EC1.

£2.80.

FEW advanced collectors and military historians know the origin of the US Cartridge Company's Collection of firearms. It was sold at auction to the company in 1899, the majority of the pieces coming from the famous firearms collection of A. E. Brooks of Hartford, Connecticut. The collection was then placed in cases at the main office of the US Cartridge Company in Lowell, Massachusetts, and over the next 20 years the Company added to the collection.

It became one of the most famous arms collections in the country. Every type of major firearm from the Revolutionary War, War of 1812, American Civil War, Spanish-American War and World War One, was in the collection. There were also many other intriguing war relics such as cannon, crossbows and other antique weapons. When the first post-war recession occurred in the 1920s, the US Cartridge Company needed to raise money, and so the collection was auctioned.

Original copies of this book, which has been out of print for some time, are much

sought after by private collectors and rare book dealers. There are many illustrations depicting the collection and entries have been made by separating the firearms into hand and shoulder weapons. Each arm is described in detail as to its manufacture, action, period of use, function and markings.

United States Single Shot Martial Pistols, 1776-1945

Charles Winthrop Sawyer.

WE Inc, New York,

distributed in UK, British Commonwealth

and Europe by Patrick Stephens Ltd,

9 Ely Place, London EC1.

£2.40.

NO group of American firearms is more interesting to collectors, historians and dealers than the single shot martial pistol (sometimes called horse pistol by gun collectors). These were used by the US Army, Navy and Militia until the adoption of the revolver and later automatic pistols. This facsimile reprint, out of print for over half a century, was extremely rare, and everyone interested in this important field of collecting will welcome this reprint which gathers together pertinent data and illustrations of all significant US single shot martial pistols manufactured. All the famous makers are covered, as well as those pistols made in US armouries, or by private individuals and companies under contract to the United States. Pistols using flintlock, percussion and metallic cartridge are also described.

Rules for Wargaming.

Arthur Taylor.

Shire Publications, Gubblecote Cross,

Tring, Herts.

40p.

THIS book sets out to give a set of wargame rules dispensing for the most part with the use of dice, intending thereby to make the results of any game dependent on skill and judgment, rather than on the fall of the dice. Whether the author succeeds or not is open to doubt. We, for instance, find the book as a whole over simplified, arbitrary, with little or no justification given for some of the statements and rife with generalisations which do not always stand up to close scrutiny.

Taking just two examples to amplify the above statements, the ground scale suggested in the book is 1 mm to 1 yard, which seems 'short' compared to the standard 25 mm figure which is based on

Continued on page 452

ATTENTION ALL RAILWAY MODELLERS!



HOW TO GO RAILWAY MODELLING

By Norman Simmons

Fifth in the 'How To Go' series, this book has chapters on layout planning, electrical wiring, track laying, locomotives, carriages and wagons, scenery and operating. Written by an expert *Airfix Magazine* contributor, it also explains the organisation of the hobby, the clubs, the manufacturers, etc. 216 pp, 8 1/2" x 5 1/2", over 211 illusts, case bound. Published on April 27. **£2.60 net, plus 13p p & p.**

Order from booksellers, model shops or from the publishers, Patrick Stephens Ltd, 9 Ely Place, London EC1N 6SQ

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Or: Your leading bookseller or model shop
Please send me one copy of **HOW TO GO RAILWAY MODELLING**. I enclose my remittance of £2.60, plus 13p post and packing.

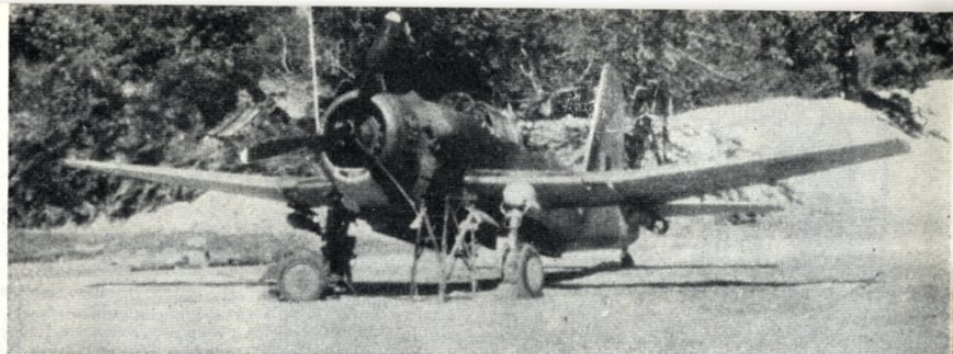
NAME _____

ADDRESS _____

(Block caps please)

A/4/72

A Vengeance at dispersal, with 250 lb bombs on her wing racks. Believed to be an aircraft of 82 Squadron. Note the starter trolley by the starboard wheel.



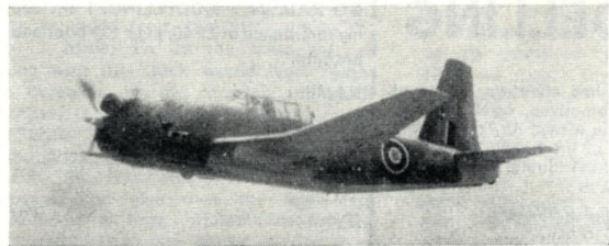
Part 35: Victory in the East

WAVELL'S 1943 Arakan campaign had limited success, yet until it took place there was only limited air activity. Although the Army made a satisfying advance, and Akyab was reached, it could not maintain its position. Vengeances and Blenheims usually wearing Dark Green/Dark Earth/Sky camouflage (although some of the Blenheim Vs had Middle East colours still) gave good support, but it was rather too soon after the disaster of recent months for such an extensive venture. The Royal Air Force also gave active support to General Wingate's first Chindit strike behind the Japanese lines in Burma, but it was principally transport aircraft that were involved.

The thrust into Arakan ended as the monsoon broke in June, 1943, a period of intensive army support being brought to an end. Currently the bomber element of the Air Force in India included seven squadrons out of a total of 53, and changes were afoot. Nos 11 and 60 Squadrons were still flying Blenheim IVs and three squadrons had the unpopular Blenheim V, machines which had outlived their usefulness. What was needed was very close tactical support for the Army, a role in which the Blenheim was unsatisfactory. Therefore large deliveries of Hurricanes were made to the Theatre at this time. Between August and October, during the rainy season, they replaced Blenheims in Nos 11, 34, 42, 60 and 113 Squadrons, final Blenheim operations being flown in August, 1943.

Although the Vengeance had given surprisingly good account of itself as a dive-bomber during the Arakan thrust it was only safe when air superiority was assured. Desirable as it was no immediate replacement type was to hand. A Command decision was made, and Air Ministry agreed, to see whether the Mosquito was suitable for this area. Although the Mosquito had at birth been designed to be suitable for tropical service, doubts were held about its wooden construction, and its adhesives. How would the high humidity affect the aircraft? Inevitably it seemed the Mosquito might be eaten by lesser breeds of insect!

Vengeance AP137 photographed over India wearing green-brown-sky colouring with UK style Type C markings. Aircraft in the hands of 82 Squadron.



Four Mosquito IIs were shipped to India in May, 1943, and picketed out to assess the effect of weather and other influences. To those in the Theatre the temptation to use them offensively was too great to resist—they soon reached Nos 681 PR and 27 fighter-Squadrons. The requirement was really for the Mosquito FB VI, but this was only just entering service and was in great demand in the Mediterranean area, and especially in north-west Europe. For the time being the Vengeance must soldier on.

For night bombing operations the first advance was the arrival of the Wellington BX with which Nos 99 and 215 Squadrons equipped in 1943. The first Mk Xs are believed to have reached India in July, 1943. These wore the same Dark Green/Dark Earth/Night camouflage common to home based machines, red letters and serials and South-East Asia roundels.

Expansion of the long-range bomber force began in August, 1943, with the formation of No 355 Liberator III Squadron at Salbani on August 18. At this time Mk IIIs also formed the backbone of No 159 Squadron.

A major alteration to the entire RAF organisation in India came in November, 1943, with the formation of SEAC, South-East Asia Command, the British and American Air Forces coming under one Command. With the arrival of Vice-Admiral Lord Louis Mountbatten as Supreme Commander of SEAC, the whole area was revitalised. The combined air force was re-organised into three large groups, as a Tactical Air Force, Strategic Air Force and Troop Carrier Command. These had four principal tasks: (1) To destroy the Japanese air force in Burma, (2) The defence of India, (3) Give support to the 14th Army and (4) Support General Wingate's jungle offensive.

By December, 1943 49 RAF squadrons were operational and an additional 12 were working up. Airfields, almost non-existent in 1942, had been carved out of seemingly impossible places and, even more important, a large number of Advanced Landing Grounds from which operations would be undertaken had been built.

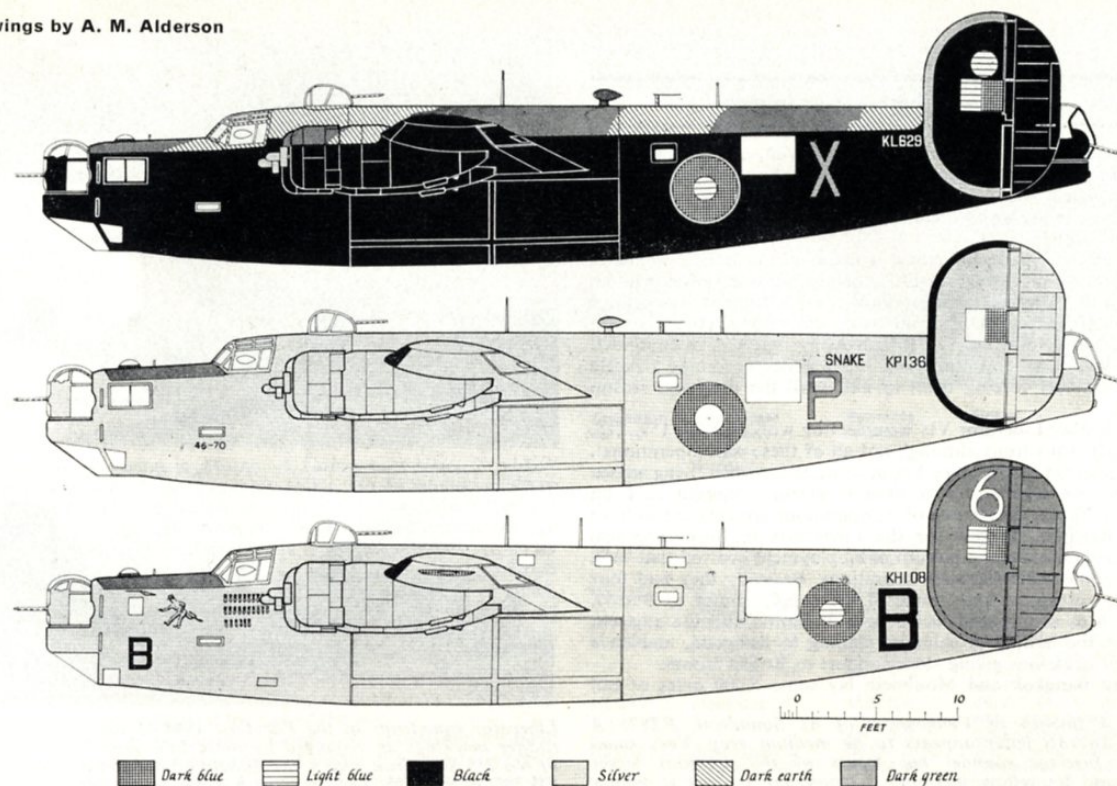
Despite appalling weather Wellingtons and Liberator IIIs were attacking communications and supply dumps in Burma, leaving the Vengeances to operate around forward positions. There was no visible front line, for the troops faced each other in jungle areas where there were few distinctive features, the lines passing haphazardly across rivers, clearings, swamps and high ground, all of which made it difficult for the air forces mounting operations overhead.

At the end of 1943 a four-pronged thrust into Burma began. Again the Vengeance squadrons gave close tactical support leaving Wellingtons to attack by night, airfields, ports, roads and rail communications, the latter being most important to the enemy. A quarter of the longer range bombing operations were directed against railways especially around Rangoon and on the Burma-Siam route, which cost so many British lives during its construction. Aircraft used by No 99 Squadron during these raids included HE957:A, HE958:B and HZ948:K. A typical Mk X was HZ950 which wore the usual camouflage and roundels and had Z ahead of the roundels in red and serial placed above the tailplane.

Using their very long range capability, Liberators could hit the rail installations as far away as Bangkok and Moulmein, but for the crews these long flights were exceedingly tough going because of the length of time spent in the air.

At the beginning of 1944 the Liberator force was further expanded, and re-vitalised by the introduction of the Liberator B.Mk VI. On January 15, 1944. No 356 Squadron, first to equip with Mk VIs, was formed at Salbani. Mk VI aircraft wore two similar schemes. Many were initially delivered in American camouflage of khaki green with

Drawings by A. M. Alderson



Top: Liberator B VI KL629: X of 99 Squadron wears a style of camouflage scheme carried by some Far East Liberators. More usual was natural finish and Dark Green/Medium Grey, or Olive Drab/Neutral Grey and combinations of these colours. KL629 has Dark Green and Dark Earth upper camouflage. Her letter and numbers are red, and the fuselage roundel appears to have a very fine yellow outline. **Centre:** KP136 is in natural finish, the aircraft letter and bar being grey. Her roundel centre and fin flash seem to have white areas or very pale blue. The anti-dazzle panel is Dark Olive Green. **Bottom:** KH108, also in natural finish, is more unusual. She has additional airdials and three high set windows. 'B' was four feet high in black on the rear fuselage and the figure '6' was crudely applied in white chalk on the olive green fin when the details of the aircraft were recorded in October 1944. There was a black B on the nose two feet high and 26 missions symbols were painted on and a khaki-coloured Japanese soldier being prodded by a black pitchfork had been applied. On the tail of each bomb painting was added a 'rising sun'. Fin flashes on this aircraft were only on the outer faces of the fins, which was unusual. It seems reasonable to assume that the aircraft had originally been Olive Drab and Neutral Grey in finish. Another interesting feature is the under wing roundel. It would be interesting to hear from any readers who served on the Liberator squadrons and who may be able to tell us more about their individual markings.

dark grey under surfaces, which some machines retained until their demise. Indeed, some of the ex-SEAC Mk IIIs which were used after the war, by Transport Command squadrons based in Britain, still had American paint-work. Others are known to have been repainted with British paints, dark green and medium sea grey. Official directives indicate that there was even some mixing of the schemes, presumably because of the close association between the Americans and the British in SEAC.

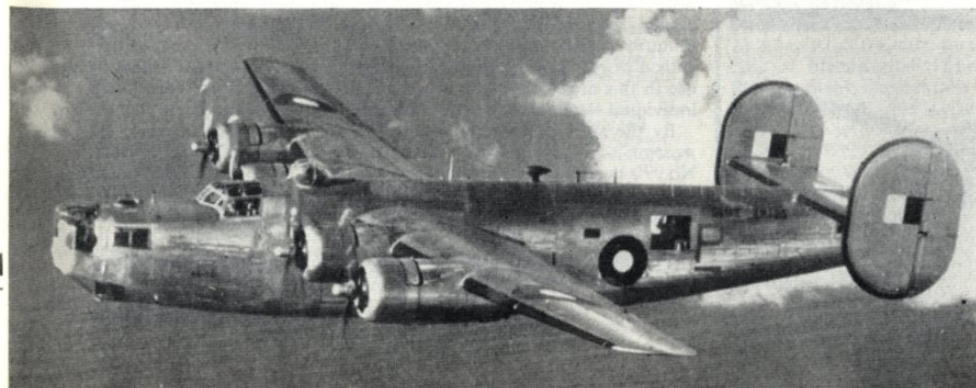
Most long range Liberator operations were by day, but over Burma night raids were mounted, for which reason some Liberators had black under surfaces and sides in north European manner and wore red codes and serials. No definite ruling appears to have been adhered to with respect to the placing of the individual letters, but usually they appear to have been forward of the roundel. Usually the ball turret was removed from RAF Liberators as on KL629

(X aft) of 99 Squadron, a machine with black under surfaces. To hasten delivery the work SNAKE was applied aft of the serials on some Liberators passing through the Middle East to the Far East, but this seems to have been infrequently applied.

An interesting point is that for a limited period Liberator squadrons appear to have worn squadron code letters. EV902 of 355 Squadron is known to have worn the letters EG-S in September 1944 at which time EV910 was EG-F. When, and for how long, the aircraft were coded seems to have gone unrecorded. Perhaps some of our readers who served in India can shed some light upon this.

A counter attack in the Arakan peninsula was made by the Japanese in February, 1944. Their objective was to punch a path through the British Army in very difficult terrain and enter the gateway to India. But the Army held its position, and looked to the Vengeances of 82, 84 and 110 Squadrons, and Hurricanes, for

Continued on next page



Liberator VIII KP136 featured in the accompanying drawing has the SNAKE inscription and typifies the finish of Liberators in SEAC service. Rounded centres and fin flash sections are probably pale blue but could possibly be white.

Bombing Colours—continued

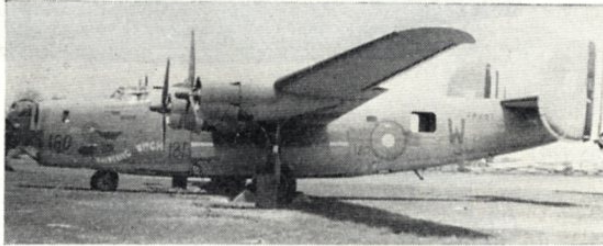
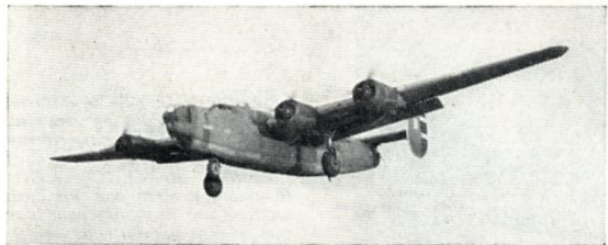
close support. In use at this time were Vengeances AN932:Q, AN959:K, AP105:U, EZ811:G and FP686:R all Mk Is of 110 Squadron which was also using Mk IAs EZ862:Y and EZ901:P. Among those in use with 82 Squadron were AN615, AN701, AN737, EZ867 and EZ985.

In March the Japanese mounted a second phase to their offensive. There were weeks of fierce fighting before the enemy was routed. Fighters and light bombers maintained close support throughout the battles of Kohima and Imphal, by the end of which the monsoon season had broken again. The British Army nevertheless continued towards Mandalay and Rangoon, the weather becoming steadily worse, eventually forcing them to halt until the monsoon season was over.

By September Liberator VIs were serving with Nos 99, 159, 215, 355 and 356 Squadrons although not all of these were operational. No 99 Squadron for instance began using them when flying air-sea rescue patrols and made its first Liberator bombing raid on November 20. All except two of its operations are believed to have been in daylight. Targets for the Liberators in Burma became progressively fewer and a pattern of employment evolved that took them on some quite fantastic operations. Basically they had four tasks: the cutting at long range of the supply routes to Burma, destruction of supply and fuel depots in Burma and the adjacent territories, the halting of shipping coming to Rangoon, and on a number of occasions giving close support to British troops.

Between Bangkok and Moulmein lay some 5,000 miles of rail

Below: A line-up of Vengeances of 82 Squadron. EZ875:A nearest. Aircraft letter appears to be medium grey. Very small diameter fuselage roundel has traces of the previous larger roundel and its yellow surround. Camouflage pattern is similar on all aircraft. **Centre:** Vengeance EZ910 with quite large fuselage roundel which appears to retain a very narrow yellow outline. Traces of an underwing roundel are also visible. Camouflage tones well with the background. **Bottom:** A Liberator VI of 215 Squadron on finals. Note the black and white tail, grey/green finish, and inward sliding nosewheel doors which distinguish this version from the Mk VIII (Imperial War Museum photo).



Liberator squadrons in the Far East 1944-45 used distinguishing rudder markings as displayed by these Liberator B VIs: EW284 of No 215 Squadron with white horizontal bars on a black rudder, EW287 of No 355 Squadron with a rudder of black and white vertical stripes, and KH284 with a white diagonal cross on a black rudder. Photographs were taken after the aircraft had been withdrawn from service and were awaiting disposal at a dump in India (G. A. Cull photos via Bruce Robertson).

track involving the use of over 700 bridges, many built by British prisoners of war. These bridges were vital to the rail network and repeatedly hit in Liberator day raids. Being mainly of wood they were quickly repaired, the track likewise; labour for the Japanese was cheap—and expendable. Often the targets involved trips of over 1,000 miles and the load was about 3,000 lb. Careful fuel consumption tests were made and later the bomb load was pushed as high as 8,000 lb. Moulmein could be reached, Bangkok (a 2,200 mile trip), the Kra Isthmus—and even the Malay Peninsula, a journey of some 2,800 miles. To do this was the equivalent of bombers based in Britain making raids on North Africa from home bases. By early 1945 such lengthy trips were quite frequent for the Liberator crews, whilst 160 Squadron also operating Liberators concentrated on maritime duties. A number of close support operations with the army were also undertaken, but the targets were tiny and the raids difficult to mount. In the later stages of the campaign some use was made of primitive radio controlled bombs to strike bridges and small targets. For target photographs the Liberators were dependant upon deep reconnaissance sorties by Mosquitoes of 684 Squadron.

A little known squadron formed on November 8, 1944 was No 358 which operated Wellington Xs and Liberator VIs. It flew a few bomber sorties, then transferred to special duties and supply dropping. Its Wellingtons carried the squadron code TA and included TA-L:LN613 and TA-C:HF134. What seems to have been unique to this squadron were several Wellingtons each fitted with a dorsal gun position. Some of the Liberators, like others in use in this area late in the war, had natural metal finish with black individual letters only and black serials KG977 being 'L'.

By the start of 1945 Liberators of the bomber squadrons were wearing squadron identity markings on the tails of their aircraft. No 99's machine wore a white disc on a black fin, No 215's had black rudders bearing two white horizontal stripes, No 355's aircraft had white rudders with three vertical black stripes and No 356's wore black rudders with white X's.

Mosquito fighter-bombers served briefly for operational service with 27 Squadron from the end of 1943 into 1944, but were soon

The pictures on this page were held over from the last issue.

Right: Baltimore V FW 332 with an attractive nose motif and legend 'Redwing' plus ops tally. **Below right:** Marauder III of the Shandur OTU in green/grey with white lettering.



withdrawn. On February 29, 1944, LR250 arrived on 45 Squadron as its first aircraft, conversion being assisted using Bisleys, with the Vengeances leaving in March. A Conversion Unit, No 1672, had formed at Yellahanka to supply crews. No 82 Squadron began conversion on July 4 at Kolar although it was late 1944 before the Mosquitoes wearing Dark Green and Sea Grey Medium camouflage were ready for operations. Trouble really hit the Mosquito force on October 20, 1944, when a machine on a practice bomb run suffered major structural failure which caused all Mosquitoes to be grounded, the results of heat and moisture in the tropical climate. No 45 Squadron resumed operations in November and 82 Squadron began intruder sorties on December 19. Nos 84 and 110 Squadrons converted in 1945. Operations were concentrated over Burma, intruder flights often being made to targets of opportunity, with 47 Squadron joining the fray particularly at the end of the war.

During 1945 the re-conquest of Burma was undertaken on three fronts until Rangoon was captured and Burma fell. Plans were then made for the invasion of Malaya. Before this could come about, the first atomic bomb was detonated over Hiroshima and the mass destruction here, and later at Nagasaki led Japan to sue for peace. The war in the East was hard for all concerned, and relatively little photographic material has survived from that zone, so perhaps this is an apt moment to appeal to any who still have pictures from their days in the East to bring them forward for the many with historical interest in this theatre of the war.

After the war ended one task awaited the Liberators, the supply of food and medical supplies to those wretched souls who had been so callously treated by the indifferent Japanese. Like the large Dakota force, the Liberators were then engaged upon repatriation of POWs, assisted by many British based Liberators, ex-Coastal Command aircraft, quickly modified into transports for the Far East run.

BOMBER SQUADRONS IN THE FAR EAST 1943 - 45

Squadron	Equipment	Example	Notes
No 11	Blenheim IV	Z9654	Equipped with Hurricanes in August 1943
No 34	Blenheim V	BA616	Re-equipped with Hurricanes, first received August 1943
No 42	Blenheim	AZ997:S	Re-equipped with Hurricanes, first received 18.10.43
No 45	Vengeance IA, II Mosquito VI	AN656:H HP881	Began operations 8.43. Mosquito re-equipment began 2.44. Aircraft used included HR291, HP941, LR306, LR307
No 47	Mosquito VI		Received 2.45; possibly coded KU
No 60	Blenheim IV	V5587	In use 3.43. Re-equipped with Hurricanes 8.43
No 82	Vengeance I, IA, II, III	FB975-B (III)	Mosquito conversion began July 1944. FB975 in use 5.44
No 84	Mosquito VI Vengeance I, IA, II, III	HR557:M FD105:U	In use 5.45. Mosquito introduced 11.44; soon withdrawn. Vengeance served 12.42 to 1.45
	Mosquito VI Blenheim V Mosquito VI	RF698:C EH354 HR526:PY-B	Re-introduced 2.45. Used during conversion in use at the end of the war: silver finish, black codes
No 99	Wellington X Liberator VI	HZ720:G KG976:L	In use 2.44. In use 12.44

Squadron	Equipment	Example	Notes
No 110	Vengeance I, IA, II, III, IV Mosquito VI	FP686:R HR620:P	In use 12.43. Re-equipped 11.44, example given in use 4.45
No 113	Blenheim V	AZ942	Last Blenheim operation 15.8.43; Hurricane received 9.43
No 159	Liberator II, III, VI, VIII	EV966 (VI) KN812 (VIII)	Mk VIII externally identifiable by outward opening nosewheel doors
No 215	Wellington X Liberator VI	HE957:V EW284:Q	Grey-green finish 'Silver' finish
No 355	Liberator VIII Liberator III Liberator VI Liberator VIII	KH372:H BZ955:F EW245:D KN774:Q	Mk III used 10.43 - 4.44. Mk VI in use 3.44 - 9.45. 'Natural' finish. Others used included KP136:P
No 356	Liberator VI	KL611:W	Used 1.44 - 11.45; example with green/black finish
No 358	Wellington X Liberator GR.VI	KH119:S HF134:TA-C KG866:M	Wellingtons coded. Liberators uncoded. 'M' had 'natural' finish

Other units in the Theatre using bombers included No 1 AGS equipped with Liberators including A:EV909, H:EV975, J:EW259, C:KG889.

Michael J. F. Bowyer



SAAF Dakota — from page 442

44 Sqn Dakotas also were seen to have 'lost' their fin serials.

Unlike the more glamorous fighters and bombers, the work of the Dakota has not appeared much in print. However, Daks received much publicity from time to time in the years gone by. For example, Dakota 6879 assisted flood relief work in April 1961 by dropping supplies in the Patensie area while, from January 17, 1969, SAAF Dakotas flew food into Lesotho during the drought in that country.

In addition to the various units mentioned before, 28 Sqn's VIP flight became a separate unit some time ago, becoming 21 Sqn. Also recently formed was the Multi-Engine Conversion Unit at Bloemfontein. These, plus 44 Sqn, 25 Sqn and Ysterplaat Station flight, incidentally the last to have had a Dakota (6879) in daylo finish, are the aircraft units operating Daks.

One of the SSA Dakotas, ZS-DJX, was transferred back to the SAAF as 6885 in 1967. The aircraft, a C-47A-15-DK c/n 12596, was previously SAAF 6835, RAF KG484 and USAAF 42-92760. The remaining SAAF Daks returned to the SAAF in February 1971, ie, (SAAF serials in brackets) ZS-BXF (6888), BXG (6887), BXI (6886) and DJB (6889), all with 44 Sqn. The latest c/s change on SAAF Daks has been the addition of a blue fin band on 25 Sqn Daks, first seen in July 1970.

an OO linear scale of 4 mm to 1 foot. Movement scale for tanks is given as 20 miles on roads, 20 miles cross-country. Why? Tanks can go a lot faster on roads than cross-country.

However, apart from these gripes, the book is of interest, if only to disagree with and to improve upon; which should make it a good favourite as a small present for someone just beginning to be interested in the hobby.

Panzer-Grenadiers.
Halbkettenfahrzeuge (half-tracks).
Almark Publishing Co Ltd,
270 Burlington Road, New Malden,
Surrey.
50p each.

THESE are two additions to the Almark 'Wehrmacht Illustrated' series dealing with aspects of the German forces in World War 2. *Panzer-Grenadiers* usefully gives pictures, tactics, weapons, and uniform details, all of value to model soldier and uniform fans. There are 5 pages of colour art showing uniform styles. *Halbkettenfahrzeuge* gives a handy guide to all the types of German half-track with over 70 illustrations. Coverage in this small book is very comprehensive for its size.

AVIATION

British Isles Airfield Guide
Merseyside Society of Aviation Enthusiasts,
11 Leybourne Grove, Liverpool L25 4SS.
40p.

THIS is the most complete guide of UK airfields ever to be published. It contains in 35 pages full lists of all active and disused civil and military airfields, together with details of geographical locations (latitude and longitude), brief details of the aerodrome operator, current activities (types of aircraft based there), length of runway, type of runway surface and approximate locations of airfields in relation to the nearest road.

Also included are aerodrome ground signals, navigational aids and air traffic control details. The disused airfield section is intended as a source for all those interested in airfield histories, and is given in alphabetical order. All airfields used since 1930 are covered.

This guide is absolutely essential for roving enthusiasts and no car should be without one! The seven pages of maps depict over a thousand indexed airfields, gliding centres and bombing ranges from Land's End to Ross and Cromarty! The volume is well printed in a handy A5 size.

Danish Military Aviation.
Stoppel.
G. L. Kongevej 154, DK 1850,
Copenhagen V, Denmark.
£1.95.

DANISH military aviation, like so many other NATO air forces, makes an interesting subject for study. At the same time the growth of the enthusiasts' movements throughout Europe has now reached adequate proportions and is reflected in the increasing number of books being published in Germany, Holland, France and now Denmark illustrating national aviation history and commenting on contemporary matters.



Above: A selection of the Miniature Figurines castings reviewed but not illustrated in the last issue. The Duke of Wellington in top hat and coat and the French infantryman waving his shako are among the models shown.

DanMil is published by Denmark's leading model shop, Stoppel-Hobby, who have in the past set high standards in transfer design and manufacture, supplementing markings available in plastic aircraft kits. They intend to publish three issues of the book each year which will aim to enlarge the general interest in historical and contemporary military aviation in Denmark and elsewhere.

In the first issue the standards of both articles, illustrations and line drawings are very high. The main feature story is on the development of the RDanAF transport squadron No 721 which early in its career used Heinkel floatplanes in Greenland. The other main feature is a photographic one on the T-33 trainer in Danish service. Here, apart from some excellent pictures, 1:72 scale plans of the aircraft are given in considerable detail. The work is well above average and will provide an extremely valuable source not only of the T-33 itself but of the many variations of colour scheme seen on this aircraft. Elsewhere there are many pictures of aircraft in present day RDanAF service all shown in a size suitable for the model maker and historian alike.

Judging by the credits on the pictures and text the Danes have a number of very knowledgeable people working for this new publication. Photographer Af Blume, artist Ole Rossel, and writer Af O. Nikolajsen stand out as being names which we will obviously hear of again.

McDonnell-Douglas A-4 Skyhawk.
Nakajima Ki 84 Hayate.
Compiled by Richard Ward/Richard M. Bueschal.
Osprey Publishing Ltd, 707 Oxford Road,
Reading, Berks.
£1.25 each.

TWO more in the Aircam series, these follow the usual format with brief introductory texts, dozens of pictures, and eight pages of colour views. As seems to be customary with books on Japanese aircraft, the Hayate book has a few rather hazy pictures. Both books offer modellers a host of ideas for colour finishes.

Squadrons of the RAF and FAA.
British Airline Fleets.
AVSOC Publications, C. R. Shepherd,
Searle House, Searle Road,
Farnham, Surrey.
10p each.

THESE two booklets will prove extremely useful for quick reference purposes by enthusiasts and modellers alike. Both are dated January 1972. The airline guide will appeal to spotters as it covers all UK-registered airlines, fleet by fleet. The military booklet reflects the ever-diminishing numbers of squadrons in Britain's armed forces and is frightening as well as accurate! Although there have been a few operational changes since January the guide is worth having as it contains the information that usually takes most enthusiasts ages to find in magazine back-numbers!

RAILWAY

Brunel and after: the Romance of the Great Western Railway.
Archibald Williams.
Patrick Stephens Ltd, 9 Ely Place,
London EC1.
£2.

AS THE title suggests, the book's contents fall into two sections, the first part describing the uphill climb of the Great Western's infancy, and the second part the smoother run with developing techniques, comfort and range, following the passing of Brunel and of the broad gauge. The author tells this stirring tale in a lucid and lively style, revealing the dignity and courage which this famous railway showed throughout its turbulent career, how it overcame its failures and how it grew to be the most famous in the British Isles. This is a companion volume to the GWR 'Boys of All Ages' series of the 1920s and 1930s.

A special feature is a two-colour gatefold map, showing the entire GWR network as it was in 1925 both on land and sea. This is an excellent, nostalgic book for railway fans.

GENERAL

Scale Models in Balsa.
A. M. Colbridge.
Arthur Barker Ltd, 5 Winsley Street,
London W1.
£1.75.

IN some 120 pages this book gives a fairly basic but competent coverage of its subject, not going into immense detail, but quite useful for anyone new to modelling. Chapters cover solid scale and flying aircraft, ships, bridges, buildings, and so on. The chapters on ships and bridges seem the most instructive of all. Working techniques for balsa generally are well covered in the second chapter, while another chapter shows how to work from plans. We would not agree with the author that plastic kits are just assembly jobs and that they've 'taken the craftsmanship out of scale modelling'; a lot of modellers change basic plastic kits beyond recognition as any visit to an IPMS meeting shows. The book is well illustrated with drawings but would have been greatly enhanced by pictures of some actual models—some drawings which appear to be from old kit boxes are the nearest the book gets to this.

IMPERIAL WAR MUSEUM

The Imperial War Museum Photographic Library will be closed to the public from April 17 to June 5 while redecorating is in progress. Postal orders will still be accepted during that period so long as negative numbers are quoted.



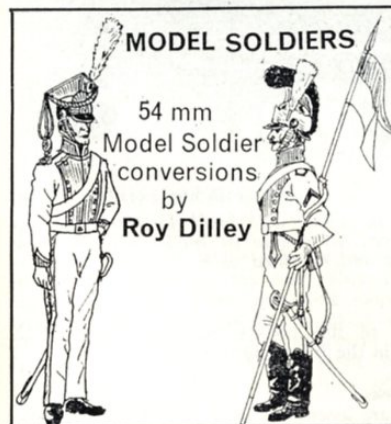
Above: Prince Henry Vauxhall converted to a 1914-18 Staff Car with suitable figures from the Airfix Motor Racing Spectators set and the passengers from the 'B' Type Bus.

the modeller who works to 54 mm scale or thereabouts, to see one subject 'done to death' whilst another is completely unrepresented.

However, and without doubt, the military modelling hobby is better served now than at any time in the past, and most manufacturers do, wherever it is practical, take note of the preferences and requirements of enthusiasts. From time to time a real gem appears to fill a gap, and such a piece is the 'Prince Henry' Vauxhall touring-car recently issued in 1:32 (54 mm) scale by Airfix Ltd.

I have already described in an article a month or so ago how at the commencement of the 1914-18 war the British Army was woefully short of motor transport, and how large numbers of civilian commercial vehicles were taken into military service. Quantities of saloon, touring, and sporting motor cars were also acquired, some by gift of the owners, some by purchase, and others by impressment, and these were employed mainly as staff cars or as scouting vehicles, some of them being converted

Right: Drawings show front and side views of the Staff Officer figure converted from Airfix spectator. As can be seen it is basically a simple carving and filing job, taking special care shaping the waist at the back. Use a disc of plastic card and plastic putty to build up crown of hat. Programme seller is similarly treated to provide the second officer.



ONE of the more unfortunate aspects of modern model manufacturing policies from the enthusiast's point of view is the way in which some subjects receive intensive coverage whilst others are virtually ignored. Models of the Napoleonic era and of World War 2 subjects are now plentiful. The American Civil War is well covered, as is the Roman Empire, but what of the Great War of 1914-1918, the Crimean War, or the many other campaigns large and small that marked the progress of the eighteenth and nineteenth centuries? A few manufacturers have produced odd items or small ranges to represent these periods, but by and large the enthusiast must convert or build from scratch where he wishes to achieve a comprehensive coverage.

It all turns on economics of course, and potential markets, for obviously a business must be economically viable or fail, but it can be rather depressing, particularly for

Right: A close view of the two standing officers, seated officer and ASC driver all made from 'rigid' plastic pieces. Below: Typical grouping of the pieces; these are even more enhanced in a suitable scenic setting.



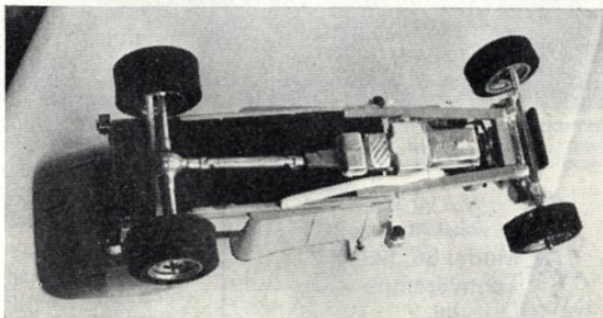
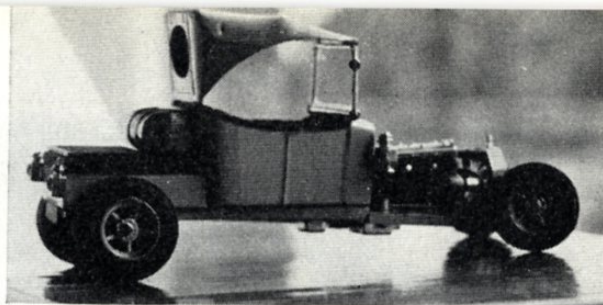
FORD HOT ROD

BUILDING A MODEL HOT ROD USING THE AIRFIX MODEL T FORD

By MARTIN DE'ATH

HOT Rodding started in the USA just after the Second World War when young ex-GIs straight out of the services, bored with their civilian jobs, started buying old cars, stripping them down to make them lighter and tuning the engines to make them go faster. This caused a lot of rivalry between these young men, who had become known as Hot Rodders, leading to unlawful races along public roads and the use of traffic lights as drag strips. This became so bad that the authorities and the Hot Rodders got together and formed the various Hot Rod and Drag Racing Clubs throughout the USA. The authorities provided disused airfields for conversion into Drag Strips so the Hot Rodders could have races without endangering other people's lives. During the 'fifties and 'sixties, hundreds of these clubs and drag strips sprang up all over the USA, and nowadays drag racing is very big business, second only as a spectator sport to baseball.

In Britain, Drag Racing and Hot Rodding have only become popular in the last five or six years, but are on the increase. British Hot Rods look a bit different from their American counterparts, mainly due to the different traffic laws and also, of course, the uncertain British weather. Still, this has not stopped some people, who have built very good and practical Hot Rods.



Top: Completed model in yellow with black interior, blue top and brass fittings. **Above:** Underside of model showing new engine and modified axles.

The basic component of this conversion is an Airfix 1912 Model T Ford modified in the following way.

Stage 1—Body and Chassis

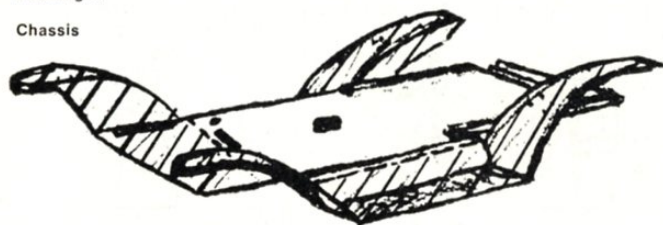
The body and chassis are assembled as in the kit instructions, leaving out part Nos 1, 4, 9, 10, 11, 16, 17 and 18. Put aside part Nos 6, 15, 19 and 20 as these will be needed later on. When the body/chassis is dry, using a fretsaw, cut off the mudguards on the line shown in drawing A. Also remove the front of the chassis directly in front of the firewall.

Next, the flat back effect is made by sheeting the sides of part Nos 12 and 13. Several pieces of plastic card are cemented together to form the top of the flat back, part No 15 can then be cemented on so as to make a slightly raised platform. Make the front chassis members from $\frac{1}{8}$ inch square plastic sprue (Drawing B). The length of this depends on what engine is used; my drawings will suit the Airfix Jaguar engine. If the Jaguar engine is chosen, the firewall and chassis will have to be modified to

Drawings not to scale remove shaded portions

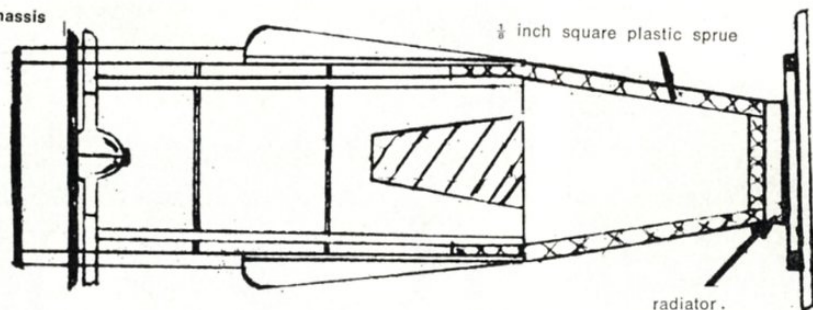
Drawing A

Chassis

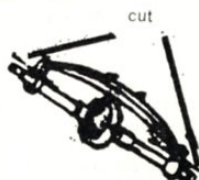


Drawing B

Front Chassis



Front and rear suspensions



Drawing C



Drawing D

radiator.



clear the engine gearbox and bell housing, engine mountings will also have to be fabricated from scrap.

Stage 2—Front and Rear Axles

These are from the basic Model T kit but are modified in the following way. First, the rear axle: Cut the spring off and re-cement it in front of the diff unit, having first filed a flat on the diff unit, this lowers the rear. Then cement to chassis as per instructions. The front axle and suspensions are modified as follows: Cut the headlamp brackets off and keep them safe. Then remove the spring and re-cement it behind the axle (Drawings C and D). This lowers the front. Wheels and tyres are from the Ford 3 litre kit with the addition of part Nos 24, 25, 29 and 30 from the Model T Ford.

Stage 3—Finishing Details

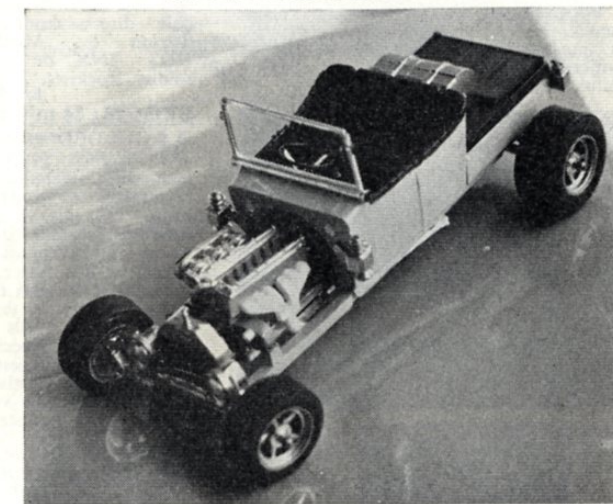
Headlights, tail lights, sidelights and radiator are from the Model T kit. Interior is made up using the steering wheel, gear-change lever, and pedals from the Airfix Mini. The standard bench seat is kept, with the addition of seat belts. The Jaguar

engine (if used) is left in situ with the addition of a pancake air filter made from plastic card. The prop shaft has to be shortened, and the exhaust adjusted to suit. The windscreen is shortened just above the stays and replaced by a piece of plastic sprue. The soft top is first shortened from the front up to the windscreen locating channel and then shaped. Cut a different shaped hole in the back for the rear window (diamond, round, etc) and the sides are filed down to give it a more modern look.

Stage 4—Painting

My model is coloured a bright yellow with black interior and a blue soft top. The wheels and lights, radiator, and parts of the engine are done in brass colour which sets the whole model off beautifully.

Left: View of model with soft top fitted and Jaguar engine clearly shown. **Below:** Model with soft top removed. Note new wheels taken from the Ford 3 Litre kit.



Model Soldiers—from page 453

finishing touch, and to disguise the rather heavy moulding of the spokes in the wire wheels, I added 'canvas' wheel covers, made from discs of tissue-paper cut to the required diameter and attached firmly to the wheels. This was done by laying the paper discs directly on to the spokes and brushing on liquid cement, which soaked through the paper and made a secure bond. It is advisable to paint the wheels completely before attaching the covers, then just scrape the paint off the extreme outside surfaces of the spokes so that the tissue is applied on to bare plastic. Covers of this type were frequently fitted to the real cars, so the modification is quite authentic.

Tyres should be painted dark grey, not

dead black, and it is permissible to use a sort of buff colour since some tyres issued were of this hue. Muddy or dusty effects can be applied to suit the individual modeller's taste, but it is worth remembering that staff-cars tended not to be used in the extreme forward areas, where the roads had been broken up by shell-fire and the incessant pounding of the heavy steel-rimmed wheels of guns and wagons.

The figures shown in the illustrations are representative of staff officers and a driver of the period. All have been converted from Airfix hard plastic kit figures and the Motor Ace set. Both seated figures were made from the seated passenger with folded arms included in the 'B' Type Bus Kit, with the

civilian clothes suitably trimmed to represent uniform, and the head replaced with that of the driver. The 'Old Bill' Bus kit also contains several seated figures of soldiers, and these can be similarly converted and adapted to give a number of attitude variations if desired.

Readers of an earlier article of mine published some two years ago, will remember the stout officer in the British Warm overcoat. He was made from the duffel-coated spectator in the Motor Ace figure set, with the coat carved and sanded to shape, the cap built up, and the trouser legs smoothed down to represent riding boots. A similar series of operations was carried out on the programme seller in the same set, resulting in the other standing officer.

Posed against an authentic background, this little group combining vehicle and figures can be very effective. Your own imaginations and experiments will enable you to come up with many variations.

Colour details for the 'Prince Henry' Vauxhall are as follows. Body and chassis: Khaki or Service Grey. WD No.: White. Upholstery: Dark Brown (semi-matt to depict leather). Running board inserts: Dark Grey. Canvas wheel covers: Khaki.

Left: For photographic purposes the two seated figures have been placed on the running board; they should, of course, be seated in the vehicle. Note that if the officer is to ride in the rear seat his legs will have to be shortened to fit.



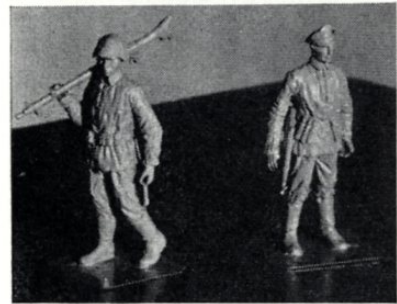
NEW

KITS AND MODELS

Jackboot: 54 mm soldiers

NEW from the ever increasing range of metal 'Jackboot' Third Reich 54 mm figures are a Waffen-SS Rottenführer and a Waffen-SS Infantryman carrying an MG 42 on his shoulder.

Both figures are wearing camouflage smocks and in relaxed positions. Detail is nicely cast including the lacing so noticeable on this type of smock. Minor faults are the rather short length of



Above: Two new 'Jackboot' figures of Waffen-SS infantrymen in camouflage smocks.

the MP 40 ammunition pouches on the Rottenführer and a slightly mis-shapen steel helmet on the infantryman, which although apparently covered with a camouflage cover is lacking in the characteristic 'tail' of the German Stahlhelm. Apart from these slight inaccuracies the figures are good and should make nice additions to any collection of World War 2 figures. They are available from Model Figures and Hobbies, 8 College Square North, Belfast BT1 6AS at a cost of 60p in kit form, 75p assembled, post and packing 5p per figure. Painting instructions are included with each.

D.L.

Hinchliffe: 1:76 scale figures and gun

COMING from Hinchliffe this month are a brand new range of figures and weapons covering the major combatants of the Second World War. Designed to fit in with the existing Airfix range of 1:76 scale figures, the new range includes American infantry with marching packs, German Paratroopers and gun crews for the superb range of guns.

The guns are in the usual kit form with quite exceptional moulding detail. Weapons covered at present are the 105 mm Howitzer, 75 mm Pak anti-tank, and the British 17 pdr with more to come.

The only thing that has gone slightly awry with this series is the fact that the kneeling German infantryman is slightly too big in relation to the standing figures; however the manufacturers hope to correct this with later releases.

Altogether a very good series which should please the World War 2 wargamers and collectors who have felt the lack of adequate equipment for their model armies in the last few years. Price of these items are 7p per figure and 75p upwards for the guns, all available direct from Hinchliffe Models, Station St, Meltham, Huddersfield HD7 3NX, or any large model soldier stockists.

D.L.

SEGO: 54 mm and 25 mm figures

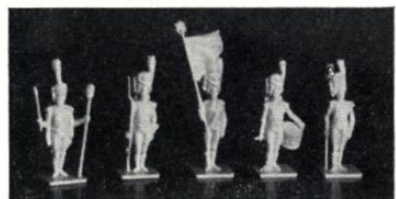
MOULDED in cellulose acetate these French 54 mm figure kits have nice sharp detailing and readily lend themselves to conversion projects because, as many people will know, cellulose acetate can be carved like wood and becomes pliable when subjected to hot water. In appearance the material looks and feels similar to polystyrene. Latest in this range is a British soldier of the 1680s in long coat, floppy hat and knee breeches tied with bows. All of which suggest an immediate conversion to a British Dragoon of the same period with very little effort. No undercoating is necessary with this type

Below: 54 mm and 25 mm SEGO figures of a British infantryman 1680 and a French Dragoon.



of figure which can be painted with cellulose based paints which will hold their colour despite handling. Price of this kit is 60p plus 5p post and packing.

Also produced by SEGO is a very nice range of wargames figures in 25 mm scale covering the French First Empire period. Included in the range are troops from France, Britain, Prussia, Austria and Russia. Cavalry figures and the



Above: SEGO 'Old Guard' figures; note the artilleryman on the left with four arms which can be removed to modify his position.

French Artilleryman are moulded with three or four arms which enables the modeller to do a quick conversion by removing the unwanted limbs and smoothing over any bumps left over from this process. Prices range from 7p to 25p, a full list being available from the SEGO Agents, Model Figures and Hobbies, 8 College Square North, Belfast BT1 6AS.

D.L.

Frog/Hasegawa: 1:32 scale Fw 190A

THE latest Frog release to reach us is the 1:32 Focke-Wulf 190A which is, in fact, made from Hasegawa moulds. The model is identical to the original Hasegawa offering which we reviewed in our October 1970 issue. It is an excellent kit, beautifully moulded, and with all parts fitting easily together. The Frog kit has different markings, however, for a Fw 190A-5/U3 of JG 1 and a Fw 190A-7/R3 and JG 26. These are in the usual neat Frog style. The kit costs £1.70 and our sample came from Jones Bros, 56 Turnham Green Terrace, London W4. Allow a little extra to cover return postage.

C.O.E.

Modeldecals: Transfer sheets

IN THE two latest sheets that have come from Modeldecals variety is the keynote. Sheet No 13 concentrates on the present day Luftwaffe and allied to existing kits now on the market they have provided markings for a T-33A, Fiat G 91R/3 and an F-104G Starfighter. The latter belongs to the Marineflieger-schwader 1, a German Navy squadron based at Jagel near Schleswig and offers markings for an unusual version of the F-104. Several of these aircraft have been seen in Britain in the last few years as they appear regularly at air shows during the summer months. The colour scheme is NATO dark grey on all upper surfaces and dull silver underneath, contrasting with the green and two greys of their air force equivalents. The T-33 is modelled on one based at Furstfeldenbruck and the Fiat G 91 belongs to LeKG 43 at Oldenburg.

Three RAF aircraft are featured on sheet No 14. The colourful markings of a Sabre belonging to No 234 Squadron, the shark's mouth of No 112 Squadron's Vampire FB 5s and perhaps best of all markings for a Chipmunk T 10 now serving with No 2 FTS at Church Fenton. The last of these is shown in the new red, white and grey scheme and provides the attractive light blue emblem with the station crest which is painted on the fuselage sides.

The instruction sheets in both cases are very well produced. These are almost worth collecting in the same way as the decal sheets themselves as they provide detailed methods of modifying the kits to fit the exacting accuracy of the markings. Several aircraft such as the Sabre for example have to have small modifica-

Continued on page 458

AIRFIX magazine

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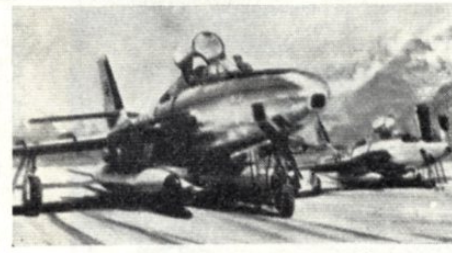


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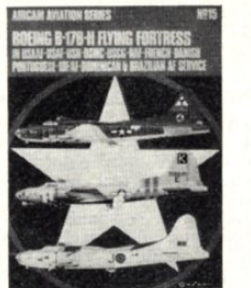
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NOTE: All Modeldecals sheets contain full markings to complete all models listed

except sheets Nos. 1, 2, 7, 11, 12 and the Vampire section of 14, where the 'D' type roundels are used from the respective kits, as also is the Nat. Insign. for the F-102. However, the Hunter section only on No. 7 does include roundels. Harrier markings on No. 7 are intended to complement those in the Frog kit. Instrument panels included for all machines on sheets Nos. 7, 9, 10, 11, 12, 13, 14 except the C-47N.

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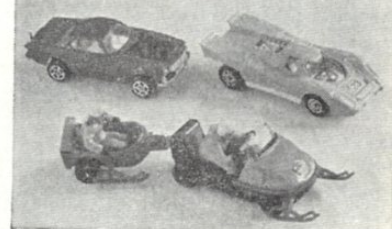
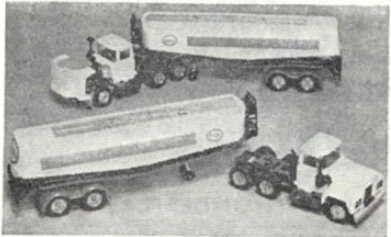
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New Kits—continued

tions made to the basic kit to fit it to the insignia. Much thought has gone into the production of these two sheets and there is no doubt that yet again Modeldecals have shown how this type of product should not only be displayed but packaged and provided with instruction sheets. Both sheets cost 38p each plus postage and can be obtained only from Modeltoys, 246 Kingston Road, Portsmouth, by direct mail. A.W.H.



Above: Four new releases from Corgi are the Super Mack Tanker, useful as an O gauge accessory, Volvo P 1800, Porsche 917 and an AMF Ski-Daddler Snowmobile and Trailer. Prices are respectively £1.35, 16p, 16p, and 32p.

Polly S: water soluble model paint

PAINTING is perhaps the most important single step in model making. A poor paint job can ruin an otherwise perfect model while a good paint finish can make even an indifferent model look reasonably presentable. Most modellers, particularly railway modellers, will be familiar with the Floquil range of paints and the excellent finish they give. These paints require special Dio Sol thinner for thinning and for cleaning brushes, etc. When painting plastics care is necessary in application to avoid crazing of the surface; alternatively Floquil Barrier can be painted on prior to applying the Floquil paint.

Now the makers of Floquil have developed a new paint which has the same excellent qualities but which is water soluble! The range includes 13 railroad (US) colours, 25 general purpose colours, and a selection of military colours. These paints can be used on plastic, card, wood, etc, on plaster scenery, and on metal after priming. We can highly recommend these paints as being very convenient to use and giving an excellent finish.

Victors, 75 Chapel Market, Islington, London, N1 9ER, supplied our samples and have the whole range in stock. Railroad colours are 34p per 1 oz. bottle. General colours, 22p per 1 oz. bottle. Colour cards with actual paint samples are available from Victors for each selection of colours, on receipt of a SAE. M.A.

Midori: 'Sea Gull' yacht

THE Sea Gull is a kit based upon a Bermudian rigged ocean racer similar to those used in the Fastnet races and similar competitions. The overall length of the model is 10 inches with a mast height of 9½ inches, which appears to give a scale of 1:45.

The parts are moulded in white, brown, chromed and brass finish plastic and are all numbered. Included is a small electric motor, propeller and shaft, also cement, lubricating grease and thread for rigging. The plastic sails are not of the usual preformed variety but are almost the texture of cloth. The hull is formed in one piece with separate rudders and lead keel plate. Provision is made to box in the apertures in the hull for keel and prop shaft after fitting. On our sample it was found necessary to fit a rubber gland for the prop-shaft to keep the boat watertight.

The instruction sheet's illustrations are quite clear and should present little difficulty. We departed from them only in fitting the deck to the hull before rigging. The motor switch located in the cockpit is ingeniously controlled by the steering wheel.

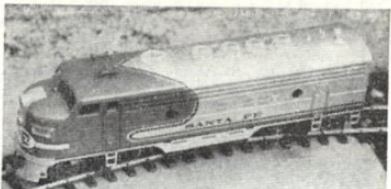
This Sea Gull will sail in two inches of water but is rather fast for her size under power; possibly a small resistance in the battery lead would be the answer. The complete cockpit is detachable for battery changing (one pen cell, not supplied) so one must be careful not to get the deck awash. If you sail her in the bath the elements can be controlled. A little painting, using the box lid as a guide will improve the looks of this little yacht.

Our kit came from Riko Ltd, 13-15a High Street, Hemel Hempstead, Herts, who are the sole importers, and the price is 64p. B.L.

Atlas: O gauge trains

AS mentioned last issue, yet another manufacturer has joined in the modern revival of O gauge, this time Roco, the Miniatanks people, who are producing models under the 'Atlas' trade mark. The range is based on American prototypes for this, like it or not, is where the main market is for these large scale (1:48) models.

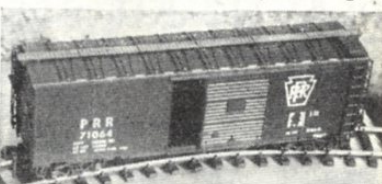
The sole locomotive available as yet is the ubiquitous F-9 EMD 'covered wagon' diesel, sold in the liveries of four famous railroads, C & O, Union Pacific, ATSF, and Burlington Northern. We



Above: O gauge F-9 EMD 'covered wagon' diesel finished in Santa Fe livery.

had this locomotive for tests and found it to be a most impressive piece of model engineering. The one-piece body shell is sharply detailed and well painted, though the nose 'flash' transfer on our sample did not adhere well. The body is a snap-fit on to the chassis with small lugs to secure it (these are a possible weak point—one snapped off on

our sample, so care is needed when removing the body). A lead weight in the fuel tank position gives the model good ballast. The motor is a sealed five-pole unit with a nicely engineered flexible drive to the two bogies, as cleverly arranged as any we've seen. The locomotive obviously had great



Above: 40 ft box car comes with sliding doors.

pulling power—it ran away effortlessly with everything we loaded on it. A pleasant feature (to us at least) is the very realistic 'roar' of the motor which gives an excellent impression of a hard-working diesel engine.

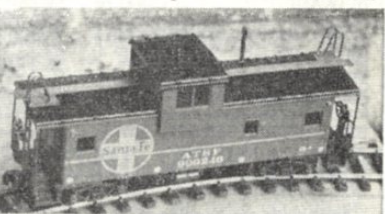
The headlight and number boxes are illuminated in the usual way. Checked out against a scale drawing the model proves extremely accurate. Windscreens



Atlas 50 ft gondola, O gauge.

wipers, air hoses, and one or two small handrails are the only missing details we could find, and these can easily be added by 'super-detail' fans. For such a good quality product the model is an excellent buy at £9.25, very inexpensive for an O gauge model locomotive.

Atlas also produce a range of American freight cars, including a 50 ft. gondola, a 40 ft. box car, a stock car, a plug-door car and caboose. These models are available in up to six different rail-



Atlas 'steel' type caboose in O gauge.

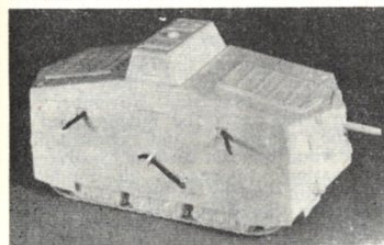
road finishes. The detail is exceptional as might be expected from the Miniatank makers. Each car has a separate underframe, which is a model in its own right complete with dummy brake rigging and all other detail, most of it not visible from the usual viewing aspect. Separate detachable bodies plug on to the chassis. Price of these models is £1.65 each, again good value for the fine quality offered. The one drawback is the coarse Triang type wheels which have deep flanges. These foul the fixings and sleepers of Rivarossi O gauge track, though they pass over Peco 'bull-head' type track. So if you use Rivarossi track you'll need to file down the wheel flanges slightly, an easy enough job we found. The locomotive, incidentally, already comes with finer flanges. Coupling is the 'horn hook' type,

though more compact than Rivarossi's similar type and not readily compatible. The two types will join up by hand, however.

Summing up this is an excellent range of models for anyone wishing to try O gauge. The models run most smoothly and impressively. Riko are the importers and the Beatties shops in London, Leeds and Manchester all stock the range. Mail orders can be placed through Beatties' main London shop, 112 Holborn, London, WC1, allowing sufficient in the remittance to cover post and packing. C.O.E.

Modakit: 1:76 scale tank kits

LATEST releases received from Modakit are two 1:76 scale tank kits. Kit AFV 01 contains mouldings for two World War 1 A7V tanks and permutations of the parts enables the modeller to choose from *Elfriede, Hagan, Wotan* or *Schnuck*. At 50p plus postage this kit is excellent value, though probably not for the absolute beginner. 'Traditional' scratch building construction methods are followed, the parts being moulded on thin plastic sheet, thus preserving the crisp detail of rivets, etc., while a blank moulding of the hull shape is included as a basis on which to build and to give rigidity to the structure. It is therefore only necessary to cut out the individual sides and ends, chamfer the edges to be joined, and then cement these together using liquid cement. Do take care here as the parts are thin and too much cement can spoil them. We found that narrow strips of Sellotape were ideal to hold the corners in place, in fact the top, two sides and one end only were all held together this way, cement brushed into the inside corners, and



Above: Unpainted model of the Modakit A7V.

then when dry the hull blank was inserted with the final end being added last. Carefully made, this kit does capture most effectively the crisp corners and the bulky look of the A7V.

Second in the series is kit AFV 02 and the cost of this is slightly more at 60p. However it again contains mouldings for two models, this time of World War 2, the PzKpfw 38(t) and the Jagdpanzer Hetzer. As in the A7V kit the rivet detail, etc., is excellent and the models are again built up from separate parts on to basic hull mouldings. Wheels are made from two moulded halves cut from the sheet with a plain disc sandwiched between. Strips of sheet plastic are included for these discs as are rods for axles and gun barrels, etc. The main snag with vacuum moulded kits is that detail can only be 'one sided' but the manufacturers have overcome this drawback in the case of the track-work by moulding it in two parts.

Strips of 'teeth' are cemented inside track plates and again the thin plastic ensures excellent detail, although care will obviously be required when shaping this to go round the sprockets and idlers. Congratulations to Modakit for their original approach, which deserves to be successful, these kits, although requiring a lot of work, are both a challenge and a delight to construct. G.S.

SOES: Trolleybus kit

ALTHOUGH there are now many kits for model buses and several for tramcars in 4 mm scale the first trolleybus kit we've heard of has only recently been marketed. This kit for a 6 wheel Rotherham trolleybus has been produced by the Sheffield Omnibus Enthusiasts Society in a limited run of only 500 kits. Once all these are sold no more will be manufactured but instead a different class of vehicle will be introduced.

As shown in the photo the kit consists of moulded transparent plastic body parts, including upper and lower floors complete with seats, wheels, tyres and axles, and trolley pole parts. The



Above: Basic mouldings for the SOES Trolleybus kit.

mouldings are neatly made and fit together quite well. Thus, much of the basic and rather tedious construction work is already done leaving the modeller free to concentrate on detailing and painting.

We would not recommend the kit for the beginner but the modeller with some experience who is prepared to take time and care in the painting and detailing could produce an attractive model with much less work than by building completely from scratch. The kit includes instructions but not a plan. It costs £1.10 including postage and packing, from the Sheffield Omnibus Enthusiasts Society, Secretary, D. E. Vickers, 144 Steade Road, Sheffield, S7 1DU. M.A.

Airmodel: Dornier 18 and 27

THE German Airmodel company has produced three new models recently. These are a complete Dornier Do 18 flying boat and a Dornier Do 27 communications type at present in service, plus a conversion kit to turn the Frog Vampire into a two-seat night-fighter or trainer.

All are produced by vacuum forming but the plastic used is thick enough to allow the fuselage and wing halves of both kits to be stuck together in rather the same way as a normal injection moulded sample. The Vampire is similarly moulded and provides the fuselage and canopy for the two-seat versions of this aircraft.

In the latter there is much work to be done if the modeller wishes to convert the existing kit into the trainer



Above, top to bottom: Civilian version of the Do 18, military version of the Do 18, and Dornier 27, all by Airmodel.

version. Apart from the new fuselage, the fins and rudders have to be altered. This can be a major undertaking and it is inadvisable for the more junior model maker to try it.

On the other hand we found both the flying boat and the communications aircraft fairly easy to construct. The Do 27 is one of the most interesting to make as there are many versions that can be built from the basic parts. Floats are provided and there are several civil versions suggested in the instruction sheet. The canopy which may have been a source of trouble has been very carefully thought out. It covers more than the actual glazed area on the completed model, but this is to advantage as one is able to rub down the joint lines after they have been filled with body putty so that there is no apparent joint between the cockpit and the fuselage.

Similar ingenuity has been shown in the Do 18. Here both the radial engine Do 18L and the D, F and G versions have been provided so that the individual can make up any of the versions of this flying boat he fancies. Both civil and military variants are included and although the kit costs £1.50 there is sufficient in it to make the expenditure well worth while.

In all three models described the instruction sheets are adequate. Those in the case of the Do 18 are best and the manufacturer has provided detailed 1:72 scale drawings showing camouflage details and a complete constructional drawing to match the large number of parts in the kit. These three models are without doubt the best that have come from Airmodel in almost their entire series and the manufacturers are to be congratulated on producing a first class product. A.W.H.

Jones Bros, 56 Turnham Green Terrace, Chiswick, London W4, have sent us two Fallar publications. First is the Fallar catalogue, illustrating in colour the whole range of kits. These include 1:100 scale aircraft and roadway items as well as buildings. Price 15p. Second is 'Scenic Modelling Made Easy', a complete guide to scenic work using Fallar material, and well illustrated in colour. Price 75p. Both books should interest wargamers as well as railway modellers.

Letters to the Editor

Aircraft Identified

YOU may be interested to know that the Mosquito and Wellington, shown in the January 'Photopage', are wearing Flying Training Command 'F' codes.

201 AFS had the code 'FMA' and used Wellington T10's and Tiger Moth T2's. It also used the code 'FMB' on some of its Wellingtons.

The code 'FMO' belongs to 204 AFS, which used the Mosquito T3, FB6 and Tiger Moth T2.

P. Munro, Dunstable, Bedfordshire.

Viscount Appeal

WHAT a splendid record has been chalked up by the Vickers Viscount airliner, which has now passed the magnificent milestone of ten million hours in the air. As the world's first turbo-prop airliner, it did more than any other to introduce the high standards of reliability and passenger comfort we now take for granted with turbine air travel today.

A project is now under way to secure for all time a fitting memento of this remarkable achievement. The Viscount type 701 G-ALWF, second production Viscount to be built and the oldest surviving example of its type, is scheduled to go on permanent public display at Liverpool (Speke) Airport. This aircraft initially flew on December 3, 1952, and after serving with BEA for ten years went on to operate in the colours of Channel Airways and British Eagle before passing to its current



The Viscount 701 G-ALWF on turn-round at Ronaldsway Airport, Isle of Man, in the summer of 1970 (A. J. Brown).

owner, Cambrian Airways, in December, 1965. G-ALWF flew its last revenue service on Christmas Eve, 1971. Liverpool Airport was chosen as a final resting place for this aircraft on account of its ease of public access, strong association with Cambrian Airways and the assurance of plenty of willing and experienced help on hand to keep G-ALWF in good (non-flying) condition.

This will be the first time that a complex post-war airliner has been preserved for public display in the United Kingdom, and a more appropriate tribute to the British aircraft industry could not have been chosen.

An appeal fund has just been launched to raise the finance necessary to secure G-ALWF for preservation at Liverpool. About £5,000 will be

CONTRIBUTIONS

Letters to the Editor selected for publication entitle the senders to each receive a free Airfix plastic construction kit, and the publication of photographs from readers is similarly rewarded. Airfix Products Ltd award the kits on the following scale:

ONE letter or photograph published is rewarded by any kit from Series 1-6 inclusive. For TWO letters or photographs any one kit up to and including Series 9 can be chosen, or alternatively two kits up to Series 6. For THREE separate contributions (eg, photographs) the entitlement is one kit up to Series 12 or three kits up to Series 6. Readers can make their choice on the special card which we send out after publication. The kits are supplied direct by Airfix Products Ltd.

We receive a large volume of mail from readers; all letters are read and we answer or acknowledge as many as possible provided that a SAE or stamp is included for reply. The Editor cannot accept responsibility for safe keeping of contributions though every care is taken. Opinions expressed by correspondents on this page are their own and do not necessarily reflect the views of the Editor or Airfix Products Ltd.

needed to acquire the Viscount and make arrangements for its display. The aircraft will then effectively be handed over on semi-permanent loan to the Liverpool Corporation.

I am sure that many readers will wish to contribute to this fund, thus helping to make possible the preservation of the Viscount G-ALWF. Any donations, however small, will be gratefully welcomed, and all will receive individual acknowledgement. Please make cheques or postal orders (crossed) payable to 'Viscount Preservation Fund', and send them to: Viscount Preservation, 17 Portsmouth Road, Thames Ditton, Surrey.

P. St. John Turner, Bassett, Southampton.

Bombing Colours

IT IS always a pleasure, eagerly anticipated, to read a new issue of *Airfix Magazine*, but I regret to say that in the case of the issue for February 1972 the pleasure was somewhat marred by two or three errors in the instalment of 'Bombing Colours', which I feel a little extra care could have avoided.

For instance, the 492 bombers lost in the series of night raids on Berlin in the winter of 1943-44, if placed wing tip-to-wing tip would have stretched 49,000 feet (about 9.5 miles), not 95 miles. The losses no doubt seem grim today, but whether measured in relation to the number of sorties flown or the number of raids carried out they were within quite acceptable limits and it would be a pity if this were to be lost sight of through exaggeration founded on carelessness.

Then again, it may well be that taking an average of seven men per crew the loss of personnel on the 2,824

aircraft missing in operations in the twelve months from March 1943 could have amounted to almost 20,000 but it is quite wrong to say that number were killed, to do so is to fail to take account of the not inconsiderable number who survived the destruction of their aircraft to be taken prisoner.

Also, there is evidently something wrong with the caption to the heading photograph. It is stated to wear the markings of 1661 CU but later to have passed to the same unit.

Lastly the interesting contrast referred to in the captions to the photographs at the foot of page 336 eludes me. If the interest of the photograph of Lancaster LM 326 is the narrow stroke of the squadron code letters, the point is hardly made by contrasting it with an aircraft with no codes at all. If the point is the presence in one and the absence in the other of fuselage windows then it would have been more appropriately taken in Part 32, where over-painting of windows is referred to.

P. H. Pimblett, Brooklands, Sale, Cheshire.

Diorama Details

I HAVE personally and through the medium of my studio been one of several associated with Artwork, Leaflets, Projects, etc., for Airfix Products over the past 10 years or so.

In this capacity I constructed a diorama for Airfix 1:32 scale German Infantry for Toy Fair display.

I was therefore surprised to see a photograph of this in Roy Dille's article (*Airfix Magazine*, November '71) which I feel could be misconstrued as to the originator and construction. Balsa wood was not used in construction but various thicknesses of mounting board with spacers to give wall thickness. The cavity was then filled and fashioned with pre-coloured Polyfilla to represent brickwork, and the mounting board plaster. The white surface of the mounting board was stripped in places and left to hang as tattered wallpaper, jagged and scored Perspex inserted in the window frame and on the floor to represent broken glass.

Richard Steeds, Pinner, Middlesex.

The picture concerned came from Airfix, not Roy Dille, and the origin was not previously known to us.—EDITOR.

Caveat Emptor

I SHOULD like the opportunity to make comment about Mr G. Harvey's letter which appeared in the February edition of *Airfix Magazine*.

Whilst agreeing that there are some companies who tend to advertise goods they do not possess and whose service is not all that it might be, I feel that the majority of your advertisers are honestly trying to serve what can be a 'fickle' public.

The biggest problem facing retailers is the inability of manufacturers to supply the promised goods on time, and

with a copy date for advertisements several weeks before the appearance of the magazine it is often tempting to assume that the models advertised will be available when the advertisement appears. Of course, more often than not this does not happen. As far as not being able to supply goods is concerned, the response rate to *Airfix Magazine* adverts is such that one can often be caught completely by surprise. Other factors that affect companies involved in importing models can vary between delays at the despatch port to problems with HM Customs and Excise.

My own company policy is to always keep the customer informed and quite often we do not bank any money for goods that are delayed until the client has them. This enables us to return the original cheque if money back is requested. On the other hand, the modeller is not entirely blameless. Frequently pages of queries arrive without any return postage but the worse failing is the man who orders a kit and asks to be advised when it has arrived then fails to either acknowledge the advice, pay for the kit, or have the courtesy to inform you that he has obtained it elsewhere. The answer lies in the hands of people like Mr Harvey, by simply not dealing with those concerns who give indifferent service.

Bryan Philpott, Airframe (GB), Newbury, Berks.

Body putty substitute

I AM stationed with the RAF in Germany but live in Roermond in Holland. Subsequently, what with language difficulty it is often difficult to obtain some of the basic modelling requisites such as body putty, cement, etc, except by sending to UK for them.

Recently I was converting the Airfix Macdonell F-4E to the RF-4E. Midway I ran out of body putty and had to look for a substitute. I found this in Holts Loy Metal Mender. It is an excellent product it sets rock hard but can be sanded, sawn or filed. It bonds very well to Polystyrene and is also non-porous therefore needs no extra filler.

Some years ago I recall a letter in *Airfix Magazine* from a chap in Canterbury which concerned Whirlwind HAR10 of No 22 Sqn. He stated in the letter that the cloth bindings on the undercarriage legs covered weapon attachments points. I must point out that he was in error about this because having served in Whirlwind Units in Borneo, Odham and Leconfield I can assure him that they in fact are dust covers for the u/c oleo extensions.

L. M. John, RAF Bruggen.

Few hints

THE following hints may be of some use to other modellers. In the September 1971 issue C. L. Johnson gave us a tip on how to obtain a sheen effect using Duraglit. Duraglit can also be used as a paint remover. Simply rub hard on the painted surface that is to be removed and the paint will come off.

As most modellers have probably found that when cementing two pieces of a kit together it is hard to hold them till they dry. To overcome this difficulty I have used clothes pegs to hold small pieces together and elastic bands or Sellotape to hold big pieces together.

When painting the sails of Historic ships mix flat brown with thinners and then

brush on. This gives the effect of a weather-beaten ship.

Finally I have a useful idea for keeping paints, modelling knives, paint brushes, masking tape, etc., tidy. I bought a 'Raaco Cabi-net'. It has 25 small drawers and tins of paint etc., fit into these drawers perfectly. It has cards for labelling each drawer and the drawers can be sectioned off with perspex strips which are supplied. It costs £1.95 and is obtained from large branches of Woolworths.

Alan Ewen, Aberdeen, Scotland

Military Markings

ALTHOUGH not myself interested in military modelling I thought that this letter may be of some help to those that are.

I was, after the usual training period for National Service, posted as a signaller to the 25th Field Regiment RA. At this time the regiment was stationed at Gun Club Hill Barracks, Kowloon, Hong Kong Crown Colony.

The Regiment itself like all field regiments was equipped with the 25 pounder gun Howitzer. Now what I think was unique for this period, 1948, was that the actual guns were not fitted with muzzle breaks, although by the middle of 1949 period they were. Also unique was that all regimental vehicles were, I think, of Canadian manufacture. The Gun Tractors or Quads as they were always called were either Chevrolets or Fords, all open topped, our 3 tonners and 15 cwt were Dodge, or Chevrolets and Fords respectively. Also we had a quota of Jeeps. Incidentally the colour of the vehicles depended on the paint available; this varied from vehicle to vehicle and could be semi-matt khaki, gloss green, or combinations of both; never matt.

Now to the constitution of the Regiment; this consisted of RHQ and 3 6 gun batteries. These were 35, 54 (Maharajapore), and 93 Batteries. Each Battery consisting of 2 Troops; ie Able and Baker: 35, Charlie and Dog: 54, Easy and Fox: 93. These of course being gun troops. The rest of each Battery were signals, clerks, etc.

The actual disposition of troops at that time in the Colony consisted of 3 Infantry battalions: 1st Buffs 2/6th and 2/10th Gurkha Rifles. Each of these battalions plus 1 Battery of Gunners were stationed in the New Territories in turn.

In 1949 the Chinese Communists approached the Border so considerable reinforcements were sent out from home. If memory serves me rightly these were 1st Leicesters, 1st Middlesex, 1st Argylls and 14th Field RA forming 27th Brigade and 1st Shropshire Light Infantry, 1st KOSB, 23rd Field RA and one further infantry battalion forming 28th Brigade. In addition there was a Brigade of Royal Marine Commandos, a Medium regiment and various other units, all forming 40th Infantry Division. Another unique occurrence insofar that the only other 40 Division was one of Kitchener's New Army, First World War Divisions. Our Brigade was numbered 26th.

Nearly all the above mentioned units served in Korea with the exception of 26th Brigade. This served in the Malayan emergency. Also 25th Field Regt had another, I think, unique

claim: it used 4 types of guns: the 25 pdr, the 17 pdr, the 3.7 AA and in Malaya the 5.5 Medium, in the space of a couple of years, and 35 Battery was at one time equipped with 25 pdr, 17 pdr, and 3.7 AA all at the one time.

Prior to joining 40 Division our vehicles were painted with the Hong Kong Land Force sign and the No 25 on the usual red/blue square. This was then changed to the fighting cock sign of 40 Division and the Regimental Number changed to 44.

The two senior Field Regiments were 42 and 43 respectively. Of the last part of this letter I am certain, having painted most of the division signs by hand myself.

E. B. Dyle, Wivenhoe, Essex.

Phantom Exhausts

WHILE reading the December issue of *Airfix Magazine*, I came across the letter from Iain Barnard concerning the F-4D Phantom jet exhausts. Refer to the photos on page 376 of April 1970 *Airfix Magazine* or the F-4B exhaust. They appear to be the same size as the F-4D. The F-4B uses J79-GE-8 engines while the F-4C,D, and the RF-4C use the J79-GE-15 engines. The difference is a cartridge starter on the USAF (F-4C,D) versions. What may be confusing is the constricting operation of the nozzles at different power levels. This can be observed on pages 60 and 61 of the book *The F-4 Phantom* by G. G. O'Rourke. Another excellent photo of the exhaust nozzle of the F-4D is on page 279 of *American Combat Planes* by Ray Wagner, Second Edition. This clearly shows the short nozzles. As shown on pages 11 and 12 of *The Phantom II* by Richard E. Gardner in the Almark series only the E and J versions have the longer exhaust outlets. The F-4E uses the J79-GE-17 engines and the F-4J uses the J-9-GE-10 engines. See also page 19 of *The Phantom II* for a comparison of the F-4E and F-4D jet exhausts, again the difference is apparent. The nozzles aren't smaller, just shorter.

The inboard pylon shown on page 377 of April 1970 *Airfix Magazine* is correct for the F-4D and the F-4E. It can also be used on the F-4C, however the Navy pylon can also be used on the F-4C as shown on page 63 of Profile No 208 on the Phantom. The pylon shown in the Airfix article is probably used on later F-4Cs. These machines could also have the IR sensor deleted.

Joseph Altmether, Rolling Meadows, Illinois, USA.

Polished Plastic

I THINK the method of polishing unpainted plastics which I have discovered is worthy of note, because of the high gloss finish it produces. I use a product called MIN, a silicone cream furniture polish made by Chiswick Products Ltd, which can be obtained from most retailers.

To get a good finish put a thin layer of polish on the surface of the plastic, using a soft, clean cloth. Leave it to dry for a couple of minutes, and rub down the surface with a dry cloth. This will bring the plastic up in a high gloss finish.

Rather than paint the silver (or other basic) colour on airliner models, just try polishing the plastic instead.

J. Skoyles, Gt Yarmouth, Norfolk.

Sopwith 1½ Strutter

An interesting conversion from the Airfix Avro 504 kit which is suitable for experienced modellers

by J. F. Chapman

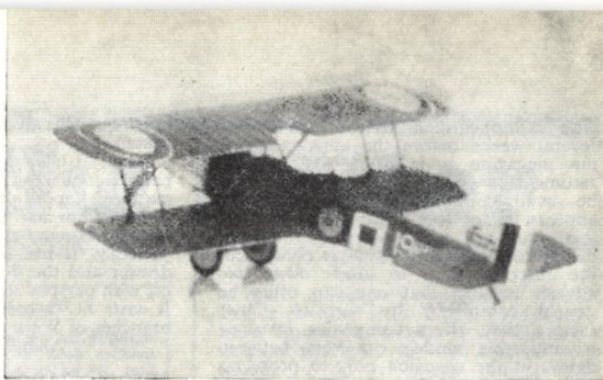
THE major work of this conversion relates to the fuselage, although the chord of the wings must also be increased if the wings from the 504 kit are used. I overcame the latter problem by using the wings from a DH 4.

Assemble the 504 fuselage, complete with engine and cowling, and then cut it in five places. The first cut is made ½ inch from the front of the cowling, the second immediately behind the forward cockpit, the third ½ inch behind the rear cockpit, the fourth ½ inch from the rear end of the fuselage. The fifth cut is not made at this point. The fuselage section with the forward cockpit is now reversed and cemented to the cowling so that the front edge of the cockpit is ½ inch from the front edge of the cowling, and plastic card bulkheads are then added to the new fuselage section so that when the rear cockpit is added the distance between the rear of the front and front of the rear cockpits is ½ inch. (If you have done the Baby conversion the cockpit section left-over can be used instead of plastic card bulkheads.)

The 1½ Strutter cowling has no cut-out section at the bottom, thus this gap in the 504 cowling has to be filled using scrap plastic and body putty. The three cooling slots in the cowling were represented by gloss black paint. Incidentally, the 'beaten panel' appearance of the 1½ Strutter's cowling can be achieved by pressing the silver paint when it is practically dry, with a piece of clean, fluffless cloth.

The edge of the fuselage behind the rear cockpit is shaved off so that when the rear fuselage section is added the fuselage upper line is horizontal (on the prototype there is a slight downward slope, but this is not noticeable on the model). Now remove a section from the rear fuselage portion so that when the last part is added the length of the fuselage from the front of the cowling to the end of the fuselage is 3½ inches. Finally, use plastic padding or other suitable filler to fair over the steps in the new fuselage and leave to set overnight before rubbing down and giving a coat of clear varnish to achieve a really smooth finish.

The wings are next to receive attention. I used the wings from a DH 4, which are the right size for chord but too wide in span. However, removing the excess span and rounding the tips is very easy, and there is an added bonus when using the DH 4 wings. The wing control surfaces are in practically the correct position, being only ⅛ inch out per side, an acceptable error at this scale I think. The wings are reduced to a scale span of 33 ft 6 inches and the tips are rounded off. The lower wing is then stuck in position so that the leading edge is ½ inch from the front of the cowling. The lower fuselage is faired to meet the plan and the cowling is rounded off with plastic card and filler. The gaps in the lower wing trailing edge are cut square and are then filled, using pieces of the wing which were cut away when the span was reduced. The upper wing centre section trailing edge also



Above: A view of the author's model completed in standard First World War finish.

requires attention to make it match the plan but it is fairly simple and the same technique as was used for the lower wing can be used.

The fin and rudder are cut from plastic card and then sanded to the correct section. The tailplane is also shaped from plastic card, though on my first attempt I cut corners by using the 504 wings which have the right chord and in addition the elevators are in the correct position. The propeller from the 504 is canted the wrong way round for a 1½ Strutter but it is possible to cut the blades off and then reposition them.

The wing struts are made from those contained in the 504 kit and others from the DH 4. The centre section inverted Vee struts are made from the 504 skid struts, cut so that the wing was ⅛ inch above the fuselage upper surface. The half-struts come from the 504 interplane struts reduced to ⅛ inch in length and the main struts from the DH 4 reduced to ⅛ inch.

The undercarriage struts are made from plastic card, but the wheels come from the 504. The undercarriage track is 1 inch so it is just possible to use the 504 axle, though I made one from stretched sprue.

Final details are now added. A machine gun from the spares box is mounted over the cowling, and the rear cockpit gun mounting is added. I used a spare DH 4 mounting though it would be simple to make one from sprue, and finally a wind-screen is added to the front cockpit.

Camouflage and Markings

British Naval Aircraft by Owen Thetford shows a line-up of RNAS aircraft in standard finish and number 19 seems to have the serial 9722. Wing roundels came from the DH 4, fuselage roundels from the 504K. The formation marking was made from squares of red and white transfer sheet. Once the transfers are in position, rigging is added from stretched sprue. *Naval Aircraft* does not show the rigging too clearly, but I was able to use the photographs in *The Book of Westland Aircraft*, published by Harborough in about 1944. This book was also of great use in the actual conversion work as it contains a three-view drawing in 1:144 scale. The Profile on this aircraft is also most useful.

I have only given what I consider to be the basic information required for anyone who wishes to undertake this conversion. Anyone who does undertake it will find that at the end he will have a very pleasing model of an important example of the RNAS/RFC armoury of 1917.

BOOK NEWS

JUST published in Great Britain is *Automobile Year No 19* (Patrick Stephens Ltd, £5), a lavish and luxurious record of the motoring world in 1971 covering the racing and competition aspects in the main but also including a section on recent 'connoisseur' cars. There are over 250 pages, 450 photographs and 65 colour plates. Coming shortly is a superb book for model railway fans, *How To Go Railway Modelling* by Norman Simmons, well known for his model railway articles in this magazine. It contains 111 photographs and over 100 drawings and includes chapters on many aspects of the subject. Price: £2.60.

Left: *Crusader AA* with unit serial number revealing it as a 4th/7th Royal Dragoon Guards vehicle. The 30th Armoured Brigade formation sign, a red fox mask on a yellow square, is painted above the serial. These markings should be useful for application to the model *Crusader AA* described in this issue (Chamberlain Collection).



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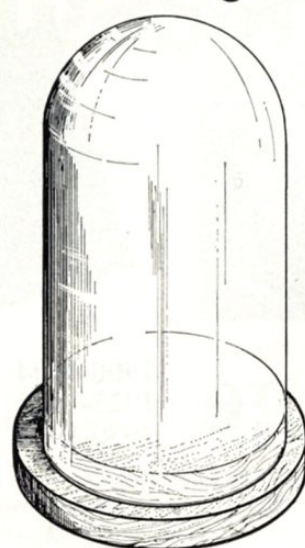
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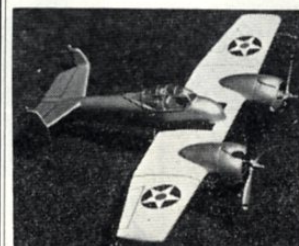
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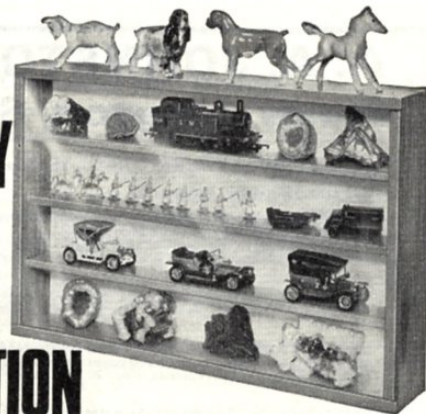
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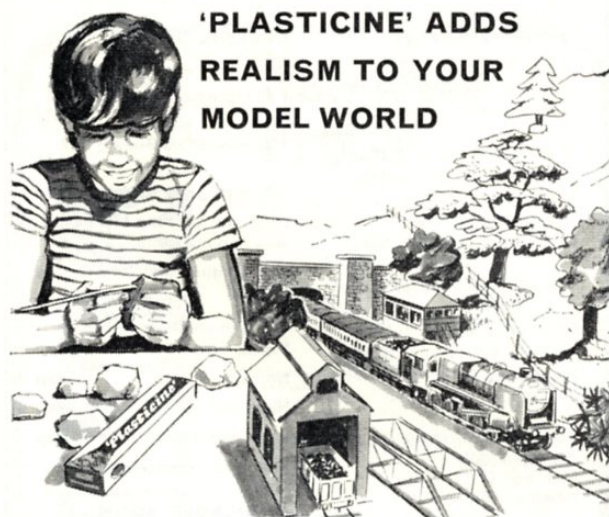
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It's a question that strikes coldly on the ear of the middle-aged. A generation has grown up which may not even have seen the film 'The Dam Busters', much less remember the real-life chapter of a famous RAF squadron. For a generation to whom Agincourt, Trafalgar, and Waterloo are more familiar names than Möhne, Eder, and Sorpe, we briefly retell the splendid story.

It's a story in which the heroes are numbered in hundreds and the supporting players in their thousands, but none of them would begrudge a special mention of Dr Barnes Wallis, who invented the bouncing bomb, and Wing Commander Guy Gibson VC DSO DFC, who formed and led 617 Squadron—the Dambusters.



"617 SQUADRON?" NOW WHO WERE THEY?"



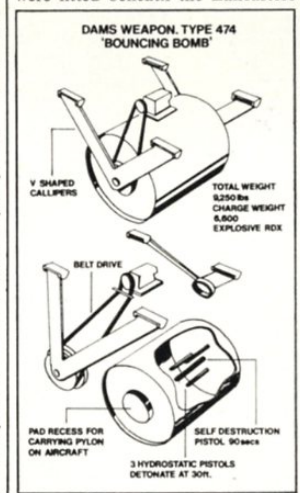
inventor that spanned sixty-five years. His mind was on the Ruhr Valley, home of a concentration of German industry and, therefore, German war effort. It would take an unimaginable number of bombs to cripple that industry, but—he observed—the Valley already contained a potential destructive force many times greater than any Britain could deliver. There were hundreds of millions of tons of water held in check by dams—seemingly invulnerable concrete dams.

If those dams could be reached, fantastic avalanches of water would flood down the Ruhr valley destroying factories, robbing steel works of their industrial water, putting hydro-electric power stations out of action, starving thermo-electric power-stations of their vital cooling water, wrecking agricultural production, bringing traffic on the canals to a standstill. And all this could be accomplished at a relatively small cost in civilian life.

To compress into a few sentences years of work and frustration, Barnes Wallis invented the bouncing bomb. The task he set himself was to devise a bomb that would skip over protective anti-torpedo nets, make contact with the up-

river side of the dam structure, and then slide down the face of the dam to explode exactly thirty feet below the surface. In the end (as we now know), he succeeded perfectly. But he relied on others to deliver the bomb—or rather the many bombs to be aimed at a whole series of dams in the Ruhr Valley.

Early in 1943, Guy Gibson was chosen to form and lead the Lancaster squadron that was to be identified as 617. Not yet twenty-five, he was already a Wing Commander with exceptional experience over Germany, and a DSO and DFC. He had to learn—and train his men in—utterly new bombing techniques. The squadron's Lancaster bombers had to fly at a speed of 240 miles an hour and an exact 60 feet above the surface of the water, releasing the bomb 450 yards from the dam. No altimeter was exact enough to ensure accuracy of height, so two spotlights were fitted beneath the Lancasters



at such an angle that their beams would converge at exactly 60 feet. So the aircraft on this most precise of all raids would actually be carrying lights!

The month of May was chosen for the raid, because the dams would then be holding back the maximum tonnage of water. The first aircraft took off at 21.10 hours on the 16th. Nineteen Lancasters in all took part in the raid—a total of 133 men. Some, like Gibson himself and his crew, were involved in two attacks (on the Möhne Dam and then the Eder) in the one night. One crew approached the Möhne Dam no fewer than six times before getting into position accurately to release their bomb... and returned safely home, though without the aircraft. They were shot down crossing the Dutch coast, and picked up from their inflatable dinghy. Two aircraft were shot down with a total of three survivors who became prisoners of war. Some never even reached their targets. Of the 133 who set out, only 80 survived.

But the operation was a success. Over 300,000,000 tons of water swept down the Ruhr Valley, accomplishing (in the words of the official German report) "a dark picture of destruction" within a few hours. Guy Gibson was decorated with the Victoria Cross by King George VI, but he and a number of other survivors of the dambusting raid of 16th May 1943 were killed on later raids.



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